CERTIFICATE

Issued Date: May. 23, 2008
Report No.: 085006R-ITCEP07V04

This is to certify that the following designated product

Product	:	**Personal Computer**
Trade name	:	**MSI**
Model Number	:	**MS-6496,Wind PC**
Company Name	:	**MICRO-STAR INT'L Co., LTD.**

This product, which has been issued the test report listed as above in QuieTek Laboratory, is based on a single evaluation of one sample and confirmed to comply with the requirements of the following EMC standard.

EN 55022: 2006
EN 61000-3-2:2006
EN 61000-3-3:1995+A1: 2001+A2: 2005

EN 55024: 1998+A1: 2001+A2: 2003
IEC 61000-4-2 Edition 1.2: 2001-04
IEC 61000-4-3 Edition 3.0: 2006
IEC 61000-4-4: 2004
IEC 61000-4-5 Edition 2.0: 2005
IEC 61000-4-6 Edition 2.2: 2006
IEC 61000-4-8 Edition 1.1: 2001-03
IEC 61000-4-11 Second Edition: 2004-03

TEST LABORATORY

Vincent Lin / Deputy Manager

QuieTek No.5-22, Ruei-Shu Valley, Ruei-Ping Tsuen Lin Kou Shiang, Taipei 244 Taiwan, R.O.C.
TEL:+886-2-8601-3788 FAX:+886-2-8601-3789 Email:service@quietek.com http://www.quietek.com

CE

Test Report

Product Name ： Personal Computer

Model No. ： MS-6496,Wind PC

Applicant ： MICRO-STAR INT'L Co., LTD.

Address ： No. 69, Li-De St., Jung-He City, Taipei Hsien, Taiwan, R.O.C.

Date of Receipt ： 2008/04/28

Issued Date ： 2008/05/23

Report No. ： 085006R-ITCEP07V04

Version ： V1.0

The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration of the equipment and evaluated measurement uncertainty herein.

This report must not be used to claim product endorsement by TAF, NVLAP or any agency of the Government.

The test report shall not be reproduced except in full without the written approval of QuieTek Corporation.

CE

Declaration of Conformity

The following product is herewith confirmed to comply with the requirements set out in the Council Directive on the Approximation of the laws of the Member States relating to Electromagnetic Compatibility Directive (2004/108/EC). The listed standards as below were applied:

The following Equipment:

Product	:	Personal Computer
Model Number	:	MS-6496,Wind PC
Trade Name	:	MSI

This product is herewith confirmed to comply with the requirements set out in the Council Directive on the Approximation of the laws of the Member States relating to Electromagnetic Compatibility Directive (2004/108/EC). For the evaluation regarding EMC, the following standards were applied:

RFI Emission:

EN 55022: 2006 Class B	:	Product family standard
EN 61000-3-2:2006 Class D	:	Limits for harmonic current emission
EN 61000-3-3:1995+A1: 2001+A2: 2005	:	Limitation of voltage fluctuation and flicker in low-voltage supply system

Immunity:

EN 55024:1998+A1:2001+A2:2003	:	Product family standard

The following importer/manufacturer is responsible for this declaration:

Company Name : _____

Company Address : _____

Telephone : _____ Facsimile : _____

Person is responsible for marking this declaration:

_____ _____

Name (Full Name) Position/ Title

_____ _____

Date Legal Signature

QuieTek Corporation

QTK No.: 085006R-ITCEP07V04

CE

Statement of Conformity

This certifies that the following designated product:

Product	:	Personal Computer
Model Number	:	MS-6496,Wind PC
Trade Name	:	MSI
Company Name	:	MICRO-STAR INT'L Co., LTD.

This product is herewith confirmed to comply with the requirements set out in the Council Directive on the Approximation of the laws of the Member States relating to Electromagnetic Compatibility Directive (2004/108/EC). For the evaluation regarding EMC, the following standards were applied:

RFI Emission:

EN 55022: 2006 Class B	:	Product family standard
EN 61000-3-2:2006 Class D	:	Limits for harmonic current emission
EN 61000-3-3:1995+A1: 2001+A2: 2005	:	Limitation of voltage fluctuation and flicker in low-voltage supply system

Immunity:

EN 55024:1998+A1:2001+A2:2003	:	Product family standard

TÜV DNV NVLAP NVLAP Lab Code: 200533-0 NEMKO ilac-MRA TAF Testing Laboratory 0914

TEST LABORATORY

Vincent Lin / Deputy Manager

The verification is based on a single evaluation of one sample of above-mentioned products. It does not imply an assessment of the whole production and does not permit the use of the test lab. Logo.

QuieTek Corporation / No.5-22, Ruei-Shu Valley, Ruei-Ping Tsuen Lin Kou Shiang, Taipei 244 Taiwan, R.O.C.
Tel: 886-2-8601-3788, Fax: 886-2-8601-3789, E-mail: service@quietek.com

Test Report Certification

Issued Date : 2008/05/23
Report No. : 085006R-ITCEP07V04

QuieTek

Product Name	:	Personal Computer
Applicant	:	MICRO-STAR INT'L Co., LTD.
Address	:	No. 69, Li-De St., Jung-He City, Taipei Hsien, Taiwan, R.O.C.
Manufacturer	:	MICRO-STAR INT'L Co., LTD.
Model No.	:	MS-6496,Wind PC
Rated Voltage	:	AC 230 V / 50 Hz
EUT Voltage	:	AC 100-240V,50-60Hz
Trade Name	:	MSI
Applicable Standard	:	EN 55022: 2006 Class B
		EN 55024: 1998+A1: 2001+A2: 2003
		EN 61000-3-2:2006
		EN 61000-3-3:1995+A1: 2001+A2: 2005
Test Result	:	Complied
Performed Location	:	Quietek Corporation (Linkou Laboratory)
		No.5-22,Ruei-Shu Valley, Ruei-Ping Tsuen Lin Kuo Shiang,
		Taipei, 244 Taiwan, R.O.C.
		TEL:+866-2-8601-3788 / FAX:+886-2-8601-3789

Documented By : Leven Huang
(Adm. Specialist / Leven Huang)

Reviewed By : kevin ker
(Assistant Engineer/ Kevin Ker)

Approved By :
(Deputy Manager / Vincent Lin)

Laboratory Information

We , **QuieTek Corporation**, are an independent EMC and safety consultancy that was established the whole facility in our laboratories. The test facility has been accredited/accepted (audited or listed) by the following related bodies in compliance with ISO 17025, EN 45001 and specified testing scopes:

Taiwan R.O.C.	**:**	**BSMI, NCC, TAF**
Germany	**:**	**TUV Rheinland**
Norway	**:**	**Nemko, DNV**
USA	**:**	**FCC, NVLAP**
Japan	**:**	**VCCI**

The related certificate for our laboratories about the test site and management system can be downloaded from QuieTek Corporation's Web Site :http://tw.quietek.com/modules/enterprise/services.php?item=100
The address and introduction of QuieTek Corporation's laboratories can be founded in our Web site : http://www.quietek.com/
If you have any comments, Please don't hesitate to contact us. Our contact information is as below:

HsinChu Testing Laboratory :
No.75-2, 3rd Lin, Wangye Keng, Yonghxing Tsuen, Qionglin Shiang, Hsinchu County 307, Taiwan, R.O.C.
TEL:+886-3-592-8858 / FAX:+886-3-592-8859 E-Mail : service@quietek.com

NVLAP Lab Code : 200347-0
1313

LinKou Testing Laboratory :
No. 5-22, Ruei-Shu Valley, Ruei-Ping Tsuen, Lin-Kou Shiang, Taipei, Taiwan, R.O.C.
TEL : 886-2-8601-3788 / FAX : 886-2-8601-3789 E-Mail : service@quietek.com

NVLAP Lab Code: 200533-0
0914

Suzhou (China) Testing Laboratory :
No. 99 Hongye Rd., Suzhou Industrial Park Loufeng Hi-Tech Development Zone., Suzhou,China.
TEL : +86-512-6251-5088 / FAX : +86-512-6251-5098 E-Mail : service@quietek.com

NVLAP Lab Code: 200533-0
1596

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1. General Information

1.1. EUT Description

Product Name	Personal Computer
Trade Name	MSI
Model No.	MS-6496,Wind PC

Component	
CPU	Intel Genuine 1.6GHz/133MHz,FSB:533MHz
Motherboard	MSI,MS-7418
HDD	Western Digital,WD1600AAJS
DVD-ROM	PLDS, DH-52C2S
VGA Card	On Board
LAN Card	On Board
Sound Card	On Board
DDR-RAM (DDR2 (1G))	A-DATA, ADOPE1A16332 A-DATA, ADOPE1A08342
WLAN Card	MSI,MS-6877
Power Cable (3 pin)	Non-Shielded,1.8m
Power Adapter (1)	MFR: LI SHIN,M/N:0335A1965 Input: AC 100-240V,50-60Hz,1.7A Output: DC 19V,3.42A Cable Out: Non-Shielded,1.2m, with one ferrite core bonded.
Power Adapter (2)	MFR: DELTA, M/N:ADP-65HB BB Input: AC 100-240V,50-60Hz,1.5A Output: DC 19V,3.42A Cable Out: Non-Shielded,1.2m,with one ferrite core bonded.
Power Adapter (3)	MFR: BesTec,M/N:NA6501WB Input: AC 100-240V,50/60Hz,1.62A Output: DC 19V,3.42A Cable Out: Non-Shielded,1.2m, with one ferrite core bonded.

Note:

The EUT is including two models, The MS-6496 for MSI and the Wind PC for different marketing requirement.

1.2. Mode of Operation

QuieTek has verified the construction and function in typical operation. All the test modes were carried out with the EUT in normal operation, which was shown in this test report and defined as:

Pre-Test Mode	
Mode 1: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (LI SHIN) Mode 2: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (DELTA) Mode 3: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (BesTec)	
Final Test Mode	
Emission	Mode 1: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (LI SHIN) Mode 2: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (DELTA) Mode 3: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (BesTec)
Immunity	Mode 1: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (LI SHIN) Mode 2: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (DELTA) Mode 3: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (BesTec)

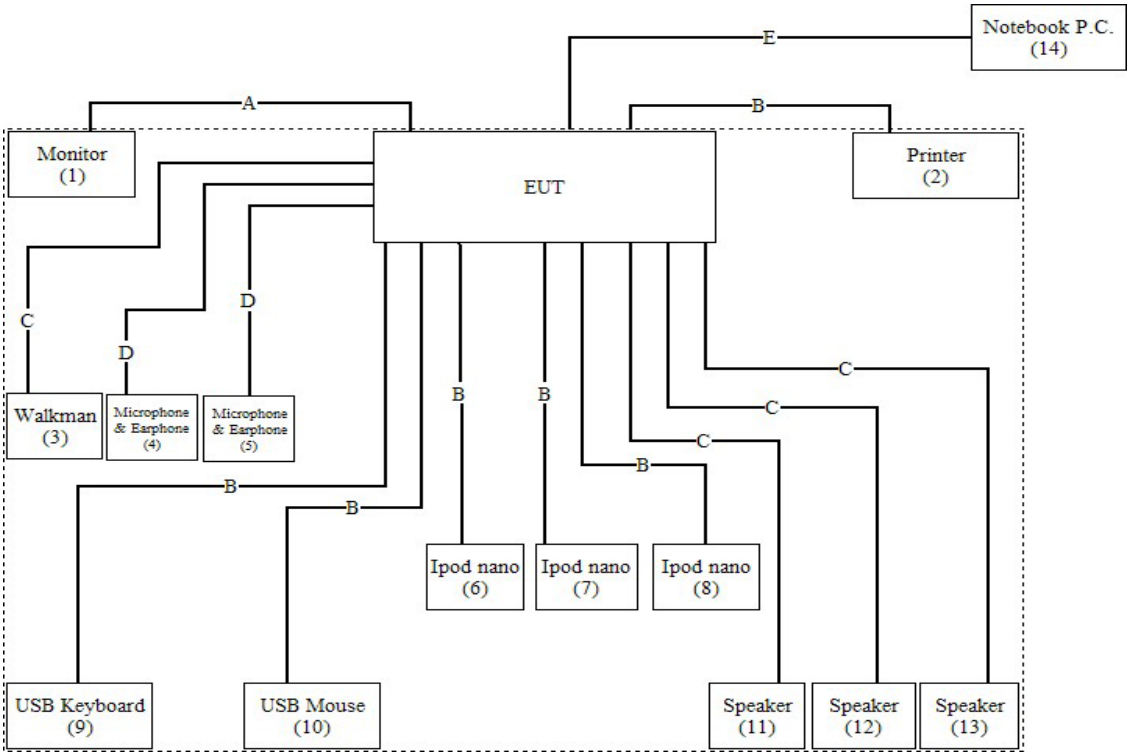
1.3. Tested System Details

The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

Product		Manufacturer	Model No.	Serial No.	Power Cord
1	Monitor	SONY	CPD-G500	2706658	Non-Shielded, 1.8m
2	Printer	EPSON	StyLus C63	FAPY093590	Non-Shielded, 1.8m
3	Walkman	AIWA	HS-TA164	N/A	N/A
4	Microphone & Earphone	PCHOME	N/A	N/A	N/A
5	Microphone & Earphone	PCHOME	N/A	N/A	N/A
6	Ipod nano	Apple	A1199	YM708A72VQ5	N/A
7	Ipod nano	Apple	A1199	YM706LSCVQ5	N/A
8	Ipod nano	Apple	A1199	YM7088TVVQ5	N/A
9	USB Keyboard	BTC	5200U	N/A	N/A
10	USB Mouse	Logitech	M-BE58	LZE11405266	N/A
11	Speaker	IBM	IBM FRU PN 09N5395	N/A	N/A
12	Speaker	IBM	IBM FRU PN 09N5395	N/A	N/A
13	Speaker	N/A	IAPLNG (4 OHM 50W)	N/A	N/A
14	Notebook P.C.	DELL	PP04X	C8YYM1S	Non-Shielded, 1.8m

1.4. Configuration of Tested System

Connection Diagram



Signal Cable Type		Signal cable Description
A	D-SUB Cable	Shielded, 1.8m, with two ferrite cores bonded.
B	USB Cable	Shielded, 1.5m,six PCS.
C	Audio Cable	Non-Shielded, 1.6m,four PCS.
D	Microphone & Earphone Cable	Non-Shielded, 1.6m,two PCS.
E	LAN Cable	Non-Shielded, 2m

1.5. EUT Exercise Software

1	Setup the EUT and simulators as shown on 1.4.
2	Turn on the power of all equipment.
3	Personal Computer reads data from disk.
4	Personal Computer sends “H” pattern to printer, the printer will print “H” pattern on paper.
5	Personal Computer reads and writes data into and from modem.
6	Repeat the above procedure (4) to (5).

2. Technical Test

2.1. Summary of Test Result

☒ No deviations from the test standards

☐ Deviations from the test standards as below description:

Emission			
Performed Item	Normative References	Test Performed	Deviation
Conducted Emission	EN 55022:2006 Class B	Yes	No
Impedance Stabilization Network	EN 55022:2006 Class B	Yes	No
Radiated Emission	EN 55022:2006 Class B	Yes	No
Power Harmonics	EN 61000-3-2:2006	Yes	No
Voltage Fluctuation and Flicker	EN 61000-3-3:1995+A1: 2001+A2: 2005	Yes	No

Immunity			
Performed Item	Normative References	Test Performed	Deviation
Electrostatic Discharge	IEC 61000-4-2 Edition 1.2: 2001-04	Yes	No
Radiated susceptibility	IEC 61000-4-3 Edition 3.0: 2006	Yes	No
Electrical fast transient/burst	IEC 61000-4-4:2004	Yes	No
Surge	IEC 61000-4-5 Edition 2.0: 2005	Yes	No
Conducted susceptibility	IEC 61000-4-6 Edition 2.2: 2006	Yes	No
Power frequency magnetic field	IEC 61000-4-8 Edition 1.1: 2001-03	Yes	No
Voltage dips and interruption	IEC 61000-4-11 2nd Edition: 2004-03	Yes	No

2.2. List of Test Equipment

Conducted Emission / SR1

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
EMI Test Receiver	R&S	ESCS 30	836858/022	2007/07/21
LISN	R&S	ESH3-Z5	836679/020	2008/02/17
LISN	R&S	ENV4200	833209/007	2008/07/27
Pulse Limiter	R&S	ESH3-Z2	357.88.10.52	2007/09/07

Conducted Emissions (Telecommunication Ports) / SR1

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Absorbing Clamp	Schaffner	KEMZ 801	21024	2008/04/21
Capacitive Voltage Probe	Schaffner	CVP2200A	18331	2007/11/11
EMI Test Receiver	R&S	ESCS 30	836858/022	2007/07/21
LISN	R&S	ESH3-Z5	836679/020	2008/02/17
LISN	R&S	ENV4200	833209/007	2007/07/27
Impedance Stabilization Network	Schaffner	ISN T400	19099	2007/07/14
Pulse Limiter	R&S	ESH3-Z2	357.88.10.52	2007/09/07
RF Current Probe	FCC	F-65 10KHz~1GHz	198	2007/11/11

Radiated Emission / Site1

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Bilog Antenna	Schaffner Chase	CBL6112B	2918	2007/09/25
Broadband Horn Antenna	Schwarzbeck	BBHA9170	208	2007/07/25
EMI Test Receiver	R&S	ESCS 30	100122	2008/02/03
Horn Antenna	Schwarzbeck	BBHA9120D	305	2007/08/10
Pre-Amplifier	QTK	N/A	N/A	2008/01/03
Spectrum Analyzer	Advantest	R3162	100803470	2007/11/10

Power Harmonics / SR3

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
AC Power Source(Harmonic)	Schaffner	NSG 1007	HK54148	2007/06/29
IEC1000-4-X Analyzer(Flicker)	Schaffner	CCN 1000-1	X7 1887	2007/06/29

Voltage Fluctuation and Flicker / SR3

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
AC Power Source(Harmonic)	Schaffner	NSG 1007	HK54148	2007/06/29
IEC1000-4-X Analyzer(Flicker)	Schaffner	CCN 1000-1	X7 1887	2007/06/29

Electrostatic Discharge / SR3

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
ESD simulator system	Schaffner	NSG 438	167	2007/06/07
Horizontal Coupling Plane(HCP)	QuieTek	HCP AL50	N/A	N/A
Vertical Coupling Plane(VCP)	QuieTek	VCP AL50	N/A	N/A

Radiated susceptibility / CB5

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
AF-BOX	R&S	AF-BOX ACCUST	100007	N/A
Audio Analyzer	R&S	UPL 16	100137	2008/04/23
Bilog Antenna	Schaffner Chase	CBL6112B	2450	2008/01/03
Broad-Band Antenna	Schwarzbeck	VULB 9166	1085	2007/08/02
CMU200 UNIV.RADIOCOMM	R&S	CMU200	104846	2008/04/23
Directional Coupler	A&R	DC 6180	22735	N/A
Dual Microphone Supply	B&K	5935	2426784	2007/08/04
Mouth Simulator	B&K	4227	2439692	2007/08/04
Power Amplifier	A&R	30S1G3	309453	N/A
Power Amplifier	A&R	100W10000M7	A285000010	N/A
Power Meter	R&S	NRVD(P.M)	100219	2008/04/22
Pre-Amplifier	A&R	150A220	23067	N/A
Probe Microphone	B&K	4182	2278070	2007/08/04
Signal Generator	R&S	SMY02(9K-2080)	825454/028	2007/09/22

Electrical fast transient/burst / SR6

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
EMC immunity system	Thermo	N/A	411225	2007/12/01

Surge / SR6

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
EMC immunity system	Thermo	EMCPRO PLUS	0411225	2007/12/01

Conducted susceptibility / SR6

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Schaffner NSG 2070 RF-Generator	Schaffner	N/A	N/A	2008/04/21

Power frequency magnetic field / SR3

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
Induction Coil Interface	Schaffner	INA 2141	6002	N/A
Magnetic Loop Coil	Schaffner	INA 702	199749-020IN	N/A
Magnetic/Electric field measuring system	Lackmann Phymetric	MV3	N/A	N/A
Triaxial ELF Magnetic Field Meter	F.B.BELL	4090	9852	2007/05/30

Voltage dips and interruption / SR6

Instrument	Manufacturer	Type No.	Serial No	Cal. Date
EMC immunity system	Thermo	EMCPRO PLUS	0411225	2007/12/01

Schaffner NSG 2070 RF-Generator				
Instrument	Manufacturer	Type No.	Serial No	Cal. Date
CDN	Schaffner	CAL U100A	20405	2008/04/21
CDN	Schaffner	TRA U150	20454	2008/04/21
CDN M016S	Schaffner	CAL U100A	20410	2008/04/21
CDN M016S	Schaffner	TRA U150	21167	2008/04/21
CDN T002	Schaffner	CAL U100	20491	2008/04/21
CDN T002	Schaffner	TRA U150	21169	2008/04/21
CDN T400	Schaffner	CAL U100	17735	2008/04/21

CDN T400	Schaffner	TRA U150	21166	2008/04/21
Coupling Decoupling Network	Schaffner	CDN M016S	20822	2008/02/23
Coupling Decoupling Network	Schaffner	CDN M016S	20823	2008/04/21
Coupling Decoupling Network	Schaffner	CDN T002	19018	2008/04/21
Coupling Decoupling Network	Schaffner	CDN T400	21226	2008/04/21
EM-CLAMP	Schaffner	KEMZ 801	21024	2008/04/21

2.3. Measurement Uncertainty

Conducted Emission

The measurement uncertainty is evaluated as ± 2.26 dB.

Impedance Stabilization Network

The measurement uncertainty is evaluated as ± 2.26 dB.

Radiated Emission

The measurement uncertainty is evaluated as ± 3.19 dB.

Electrostatic Discharge

As what is concluded in the document from Note2 of clause 5.4.6.2 of ISO/IEC 17025: 1999[2], the requirements for measurement uncertainty in ESD testing are deemed to have been satisfied, and the testing is reported in accordance with the relevant ESD standards. The immunity test signal from the ESD system meet the required specifications in IEC 61000-4-2 through the calibration report with the calibrated uncertainty for the waveform of voltage and timing as being 1.63 % and 2.76%.

Radiated susceptibility

As what is concluded in the document from Note2 of clause 5.4.6.2 of ISO/IEC 17025: 1999[2], the requirements for measurement uncertainty in RS testing are deemed to have been satisfied, and the testing is reported in accordance with the relevant RS standards. The immunity test signal from the RS system meet the required specifications in IEC 61000-4-3 through the calibration for the uniform field strength and monitoring for the test level with the uncertainty evaluation report for the electrical filed strength as being 2.72 dB.

Electrical fast transient/burst

As what is concluded in the document from Note2 of clause 5.4.6.2 of ISO/IEC 17025: 1999[2], the requirements for measurement uncertainty in EFT/Burst testing are deemed to have been satisfied, and the testing is reported in accordance with the relevant EFT/Burst standards. The immunity test signal from the EFT/Burst system meet the required specifications in IEC 61000-4-4 through the calibration report with the calibrated uncertainty for the waveform of voltage, frequency and timing as being 1.63 %, 2.8 10-10 and 2.76%.

Surge

As what is concluded in the document from Note2 of clause 5.4.6.2 of ISO/IEC 17025: 1999[2], the requirements for measurement uncertainty in Surge testing are deemed to have been satisfied, and the testing is reported in accordance with the relevant Surge standards. The immunity test signal from the Surge system meet the required specifications in IEC 61000-4-5 through the calibration report with the calibrated uncertainty for the waveform of voltage and timing as being 1.63 % and 2.76%.

Conducted susceptibility

As what is concluded in the document from Note2 of clause 5.4.6.2 of ISO/IEC 17025: 1999[2], the requirements for measurement uncertainty in CS testing are deemed to have been satisfied, and the testing is reported in accordance with the relevant CS standards. The immunity test signal from the CS system meet the required specifications in IEC 61000-4-6 through the calibration for unmodulated signal and monitoring for the test level with the uncertainty evaluation report for the injected modulated signal level through CDN and EM Clamp/Direct Injection as being 3.72 dB and 2.78 dB.

Power frequency magnetic field

As what is concluded in the document from Note2 of clause 5.4.6.2 of ISO/IEC 17025: 1999[2], the requirements for measurement uncertainty in PFM testing are deemed to have been satisfied, and the testing is reported in accordance with the relevant PFM standards. The immunity test signal from the PFM system meet the required specifications in IEC 61000-4-8 through the calibration report with the calibrated uncertainty for the Gauss Meter to verify the output level of magnetic field strength as being 2 %.

Voltage dips and interruption

As what is concluded in the document from Note2 of clause 5.4.6.2 of ISO/IEC 17025: 1999[2], the requirements for measurement uncertainty in DIP testing are deemed to have been satisfied, and the testing is reported in accordance with the relevant DIP standards. The immunity test signal from the DIP system meet the required specifications in IEC 61000-4-11 through the calibration report with the calibrated uncertainty for the waveform of voltage and timing as being 1.63 % and 2.76%.

2.4. Test Environment

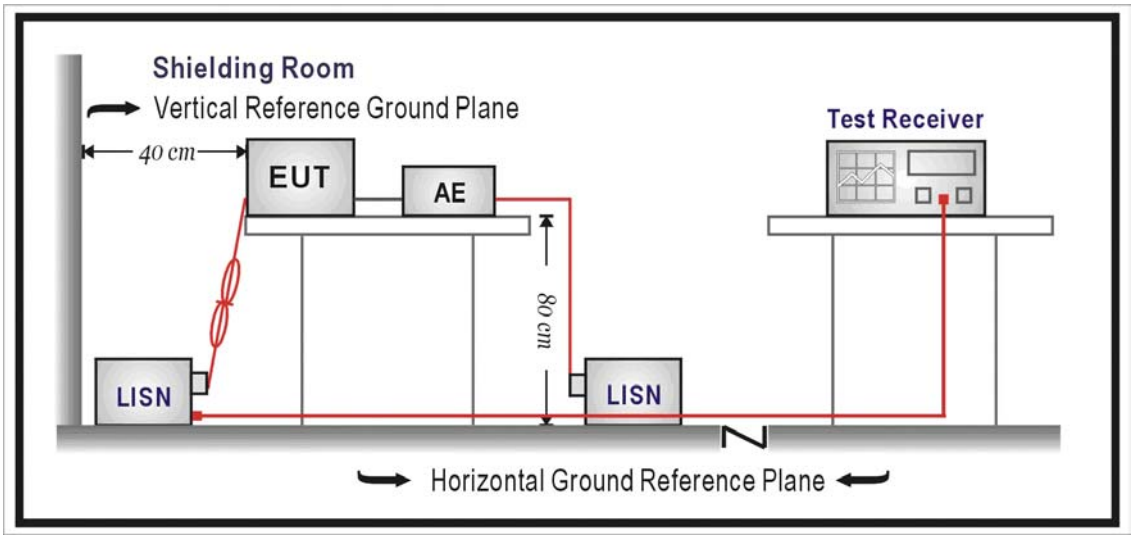
Performed Item	Items	Required	Actual
Conducted Emission	Temperature (°C)	15-35	25
	Humidity (%RH)	25-75	50
	Barometric pressure (mbar)	860-1060	950-1000
Impedance Stabilization Network	Temperature (°C)	15-35	25
	Humidity (%RH)	25-75	50
	Barometric pressure (mbar)	860-1060	950-1000
Radiated Emission	Temperature (°C)	15-35	25
	Humidity (%RH)	25-75	50
	Barometric pressure (mbar)	860-1060	950-1000
Electrostatic Discharge	Temperature (°C)	15-35	24
	Humidity (%RH)	30-60	55
	Barometric pressure (mbar)	860-1060	950-1000
Radiated susceptibility	Temperature (°C)	15-35	26
	Humidity (%RH)	25-75	54
	Barometric pressure (mbar)	860-1060	950-1000
Electrical fast transient/burst	Temperature (°C)	15-35	26
	Humidity (%RH)	25-75	55
	Barometric pressure (mbar)	860-1060	950-1000
Surge	Temperature (°C)	15-35	26
	Humidity (%RH)	10-75	55
	Barometric pressure (mbar)	860-1060	950-1000
Conducted susceptibility	Temperature (°C)	15-35	27
	Humidity (%RH)	25-75	55
	Barometric pressure (mbar)	860-1060	950-1000
Power frequency magnetic field	Temperature (°C)	15-35	27
	Humidity (%RH)	25-75	55
	Barometric pressure (mbar)	860-1060	950-1000
Voltage dips and interruption	Temperature (°C)	15-35	24
	Humidity (%RH)	25-75	54
	Barometric pressure (mbar)	860-1060	950-1000

3. Conducted Emission (Main Terminals)

3.1. Test Specification

According to EMC Standard : EN 55022

3.2. Test Setup



3.3. Limit

Limits		
Frequency (MHz)	QP (dBuV)	AV (dBuV)
0.15 - 0.50	66 - 56	56 – 46
0.50-5.0	56	46
5.0 - 30	60	50

Remarks: In the above table, the tighter limit applies at the band edges.

3.4. Test Procedure

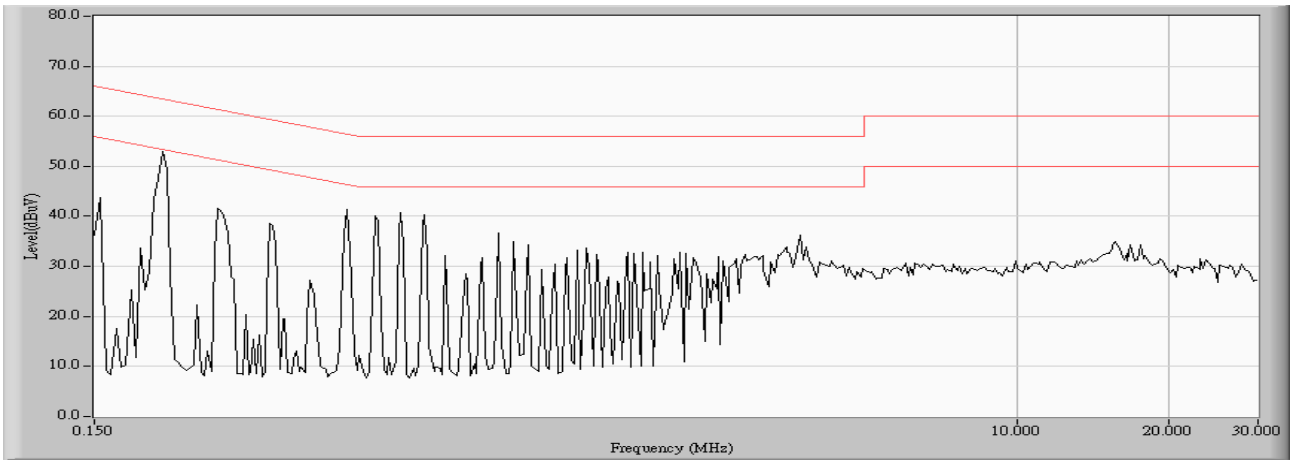
The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination.
(Please refers to the block diagram of the test setup and photographs.)
Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed on conducted measurement.
Conducted emissions were invested over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

3.5. Deviation from Test Standard

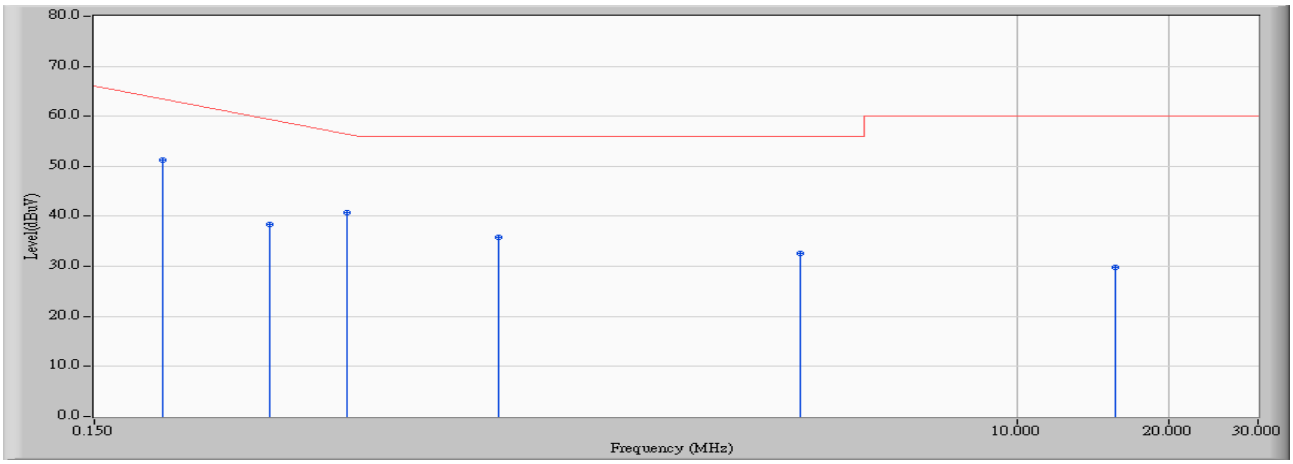
No deviation.

3.6. Test Result

Site : SR-1	**Time : 2008/04/29 - 02:21**
Limit : CISPR_B_00M_QP	**Margin : 10**
EUT : Personal Computer	**Probe : LISN-L(023) - Line1**
Power : AC 230V/50Hz	**Note : MODE 1**



Site : SR-1	**Time : 2008/04/29 - 02:22**
Limit : CISPR_B_00M_QP	**Margin : 0**
EUT : Personal Computer	**Probe : LISN-L(023) - Line1**
Power : AC 230V/50Hz	**Note : MODE 1**

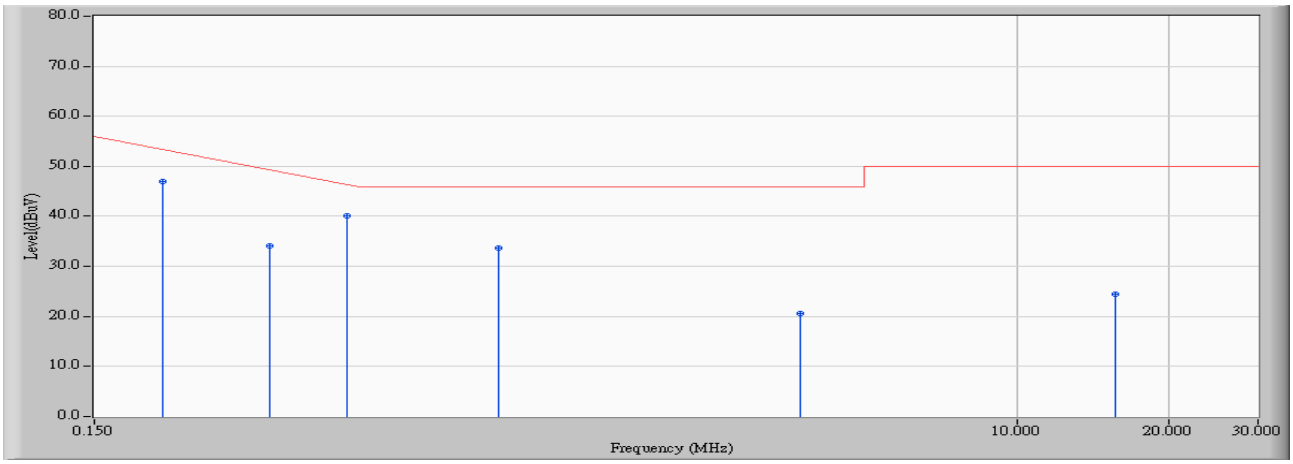


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.205	0.615	50.580	51.195	-13.234	64.429	QUASIPEAK
2		0.334	0.300	38.110	38.410	-22.333	60.743	QUASIPEAK
3		0.474	0.300	40.470	40.770	-15.973	56.743	QUASIPEAK
4		0.947	0.310	35.550	35.860	-20.140	56.000	QUASIPEAK
5		3.720	0.390	32.170	32.560	-23.440	56.000	QUASIPEAK
6		15.677	1.010	28.810	29.820	-30.180	60.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR-1	**Time : 2008/04/29 - 02:22**
Limit : CISPR_B_00M_AV	**Margin : 0**
EUT : Personal Computer	**Probe : LISN-L(023) - Line1**
Power : AC 230V/50Hz	**Note : MODE 1**

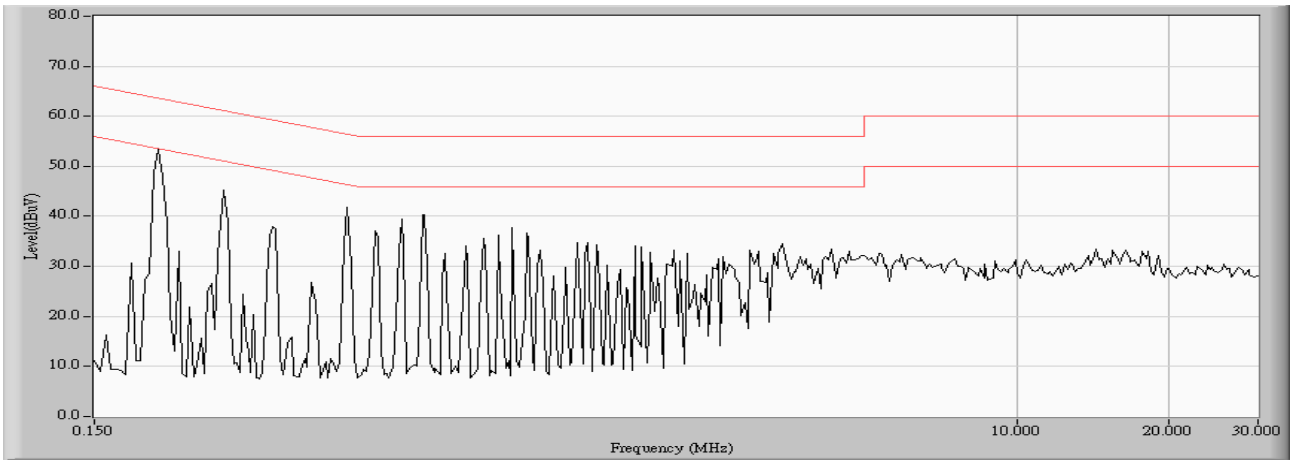


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.205	0.615	46.400	47.015	-7.414	54.429	AVERAGE
2		0.334	0.300	33.840	34.140	-16.603	50.743	AVERAGE
3	*	0.474	0.300	39.730	40.030	-6.713	46.743	AVERAGE
4		0.947	0.310	33.300	33.610	-12.390	46.000	AVERAGE
5		3.720	0.390	20.110	20.500	-25.500	46.000	AVERAGE
6		15.677	1.010	23.360	24.370	-25.630	50.000	AVERAGE

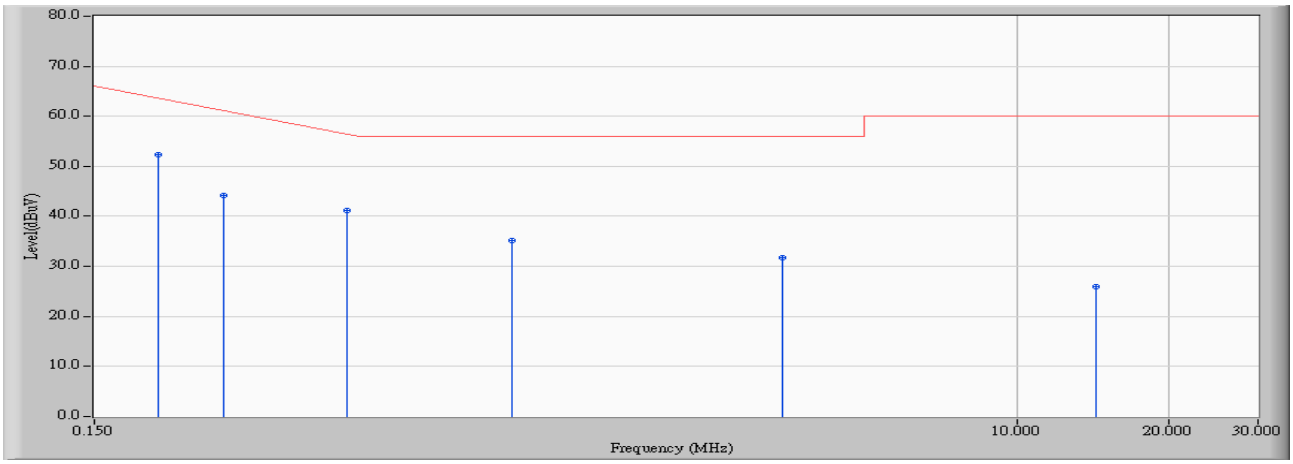
Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR-1	**Time : 2008/04/29 - 02:23**
Limit : CISPR_B_00M_QP	**Margin : 10**
EUT : Personal Computer	**Probe : LISN-N(023) - Line2**
Power : AC 230V/50Hz	**Note : MODE 1**



Site : SR-1	**Time : 2008/04/29 - 02:24**
Limit : CISPR_B_00M_QP	**Margin : 0**
EUT : Personal Computer	**Probe : LISN-N(023) - Line2**
Power : AC 230V/50Hz	**Note : MODE 1**

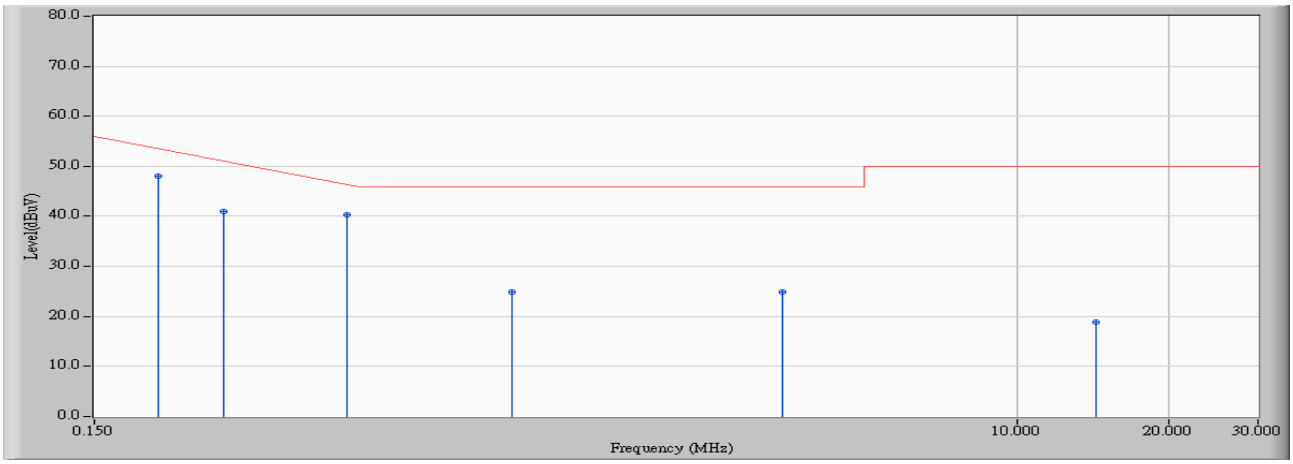


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.201	0.300	52.130	52.430	-12.113	64.543	QUASIPEAK
2		0.271	0.300	43.880	44.180	-18.363	62.543	QUASIPEAK
3		0.474	0.310	40.810	41.120	-15.623	56.743	QUASIPEAK
4		1.005	0.320	34.930	35.250	-20.750	56.000	QUASIPEAK
5		3.443	0.383	31.260	31.643	-24.357	56.000	QUASIPEAK
6		14.396	0.873	25.170	26.043	-33.957	60.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR-1	**Time : 2008/04/29 - 02:24**
Limit : CISPR_B_00M_AV	**Margin : 0**
EUT : Personal Computer	**Probe : LISN-N(023) - Line2**
Power : AC 230V/50Hz	**Note : MODE 1**

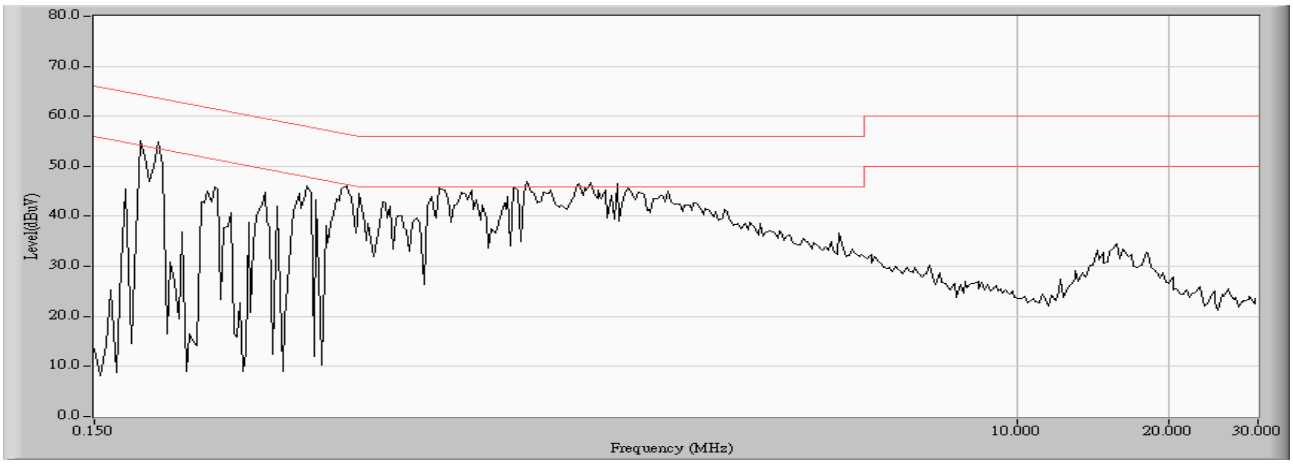


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.201	0.300	47.810	48.110	-6.433	54.543	AVERAGE
2		0.271	0.300	40.740	41.040	-11.503	52.543	AVERAGE
3		0.474	0.310	39.950	40.260	-6.483	46.743	AVERAGE
4		1.005	0.320	24.550	24.870	-21.130	46.000	AVERAGE
5		3.443	0.383	24.480	24.863	-21.137	46.000	AVERAGE
6		14.396	0.873	17.970	18.843	-31.157	50.000	AVERAGE

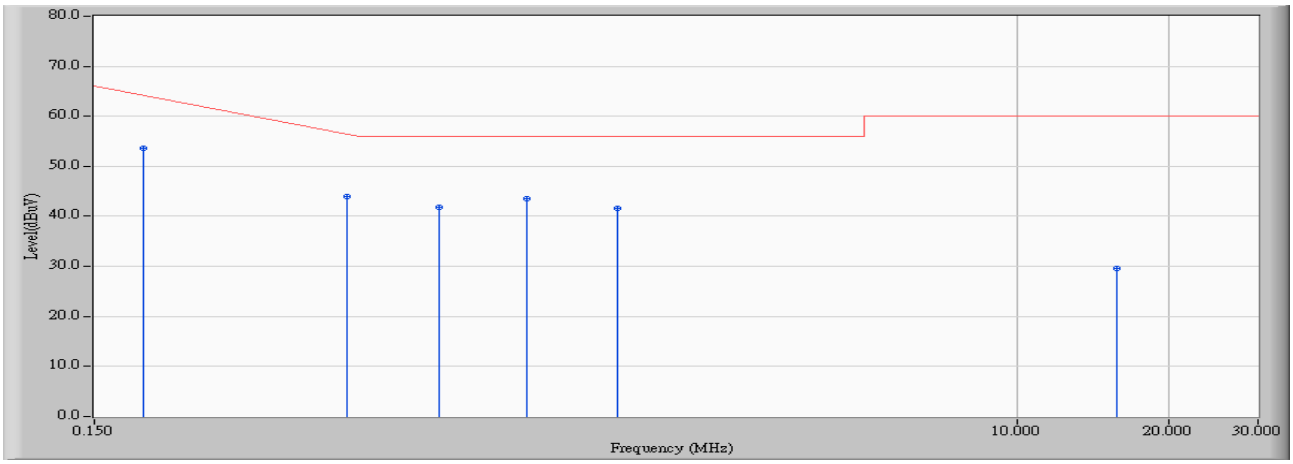
Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR-1	**Time : 2008/04/29 - 01:09**
Limit : CISPR_B_00M_QP	**Margin : 10**
EUT : Personal Computer	**Probe : LISN-L(023) - Line1**
Power : AC 230V/50Hz	**Note : MODE 2**



Site : SR-1	**Time : 2008/04/29 - 01:11**
Limit : CISPR_B_00M_QP	**Margin : 0**
EUT : Personal Computer	**Probe : LISN-L(023) - Line1**
Power : AC 230V/50Hz	**Note : MODE 2**

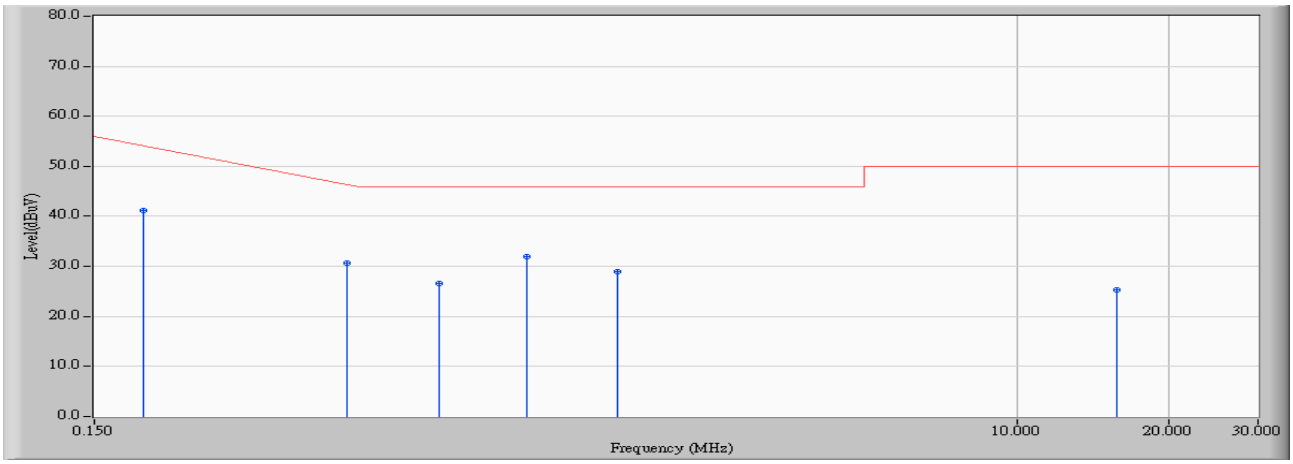


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.187	0.739	52.870	53.609	-11.334	64.943	QUASIPEAK
2		0.474	0.300	43.730	44.030	-12.713	56.743	QUASIPEAK
3		0.720	0.310	41.440	41.750	-14.250	56.000	QUASIPEAK
4		1.072	0.320	43.250	43.570	-12.430	56.000	QUASIPEAK
5		1.619	0.330	41.190	41.520	-14.480	56.000	QUASIPEAK
6		15.744	1.010	28.550	29.560	-30.440	60.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR-1	**Time : 2008/04/29 - 01:11**
Limit : CISPR_B_00M_AV	**Margin : 0**
EUT : Personal Computer	**Probe : LISN-L(023) - Line1**
Power : AC 230V/50Hz	**Note : MODE 2**

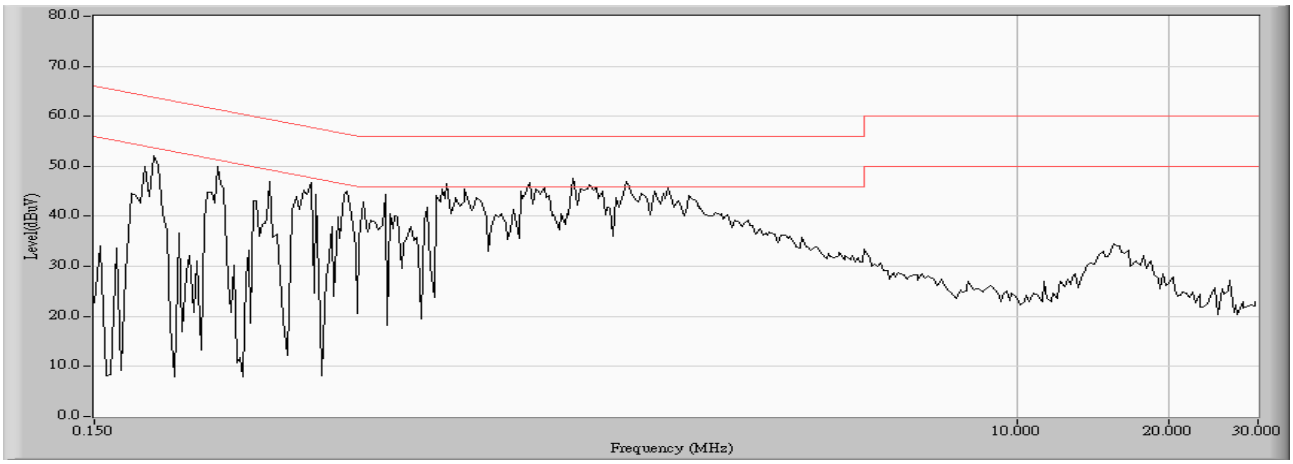


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.187	0.739	40.350	41.089	-13.854	54.943	AVERAGE
2		0.474	0.300	30.290	30.590	-16.153	46.743	AVERAGE
3		0.720	0.310	26.370	26.680	-19.320	46.000	AVERAGE
4		1.072	0.320	31.610	31.930	-14.070	46.000	AVERAGE
5		1.619	0.330	28.700	29.030	-16.970	46.000	AVERAGE
6		15.744	1.010	24.240	25.250	-24.750	50.000	AVERAGE

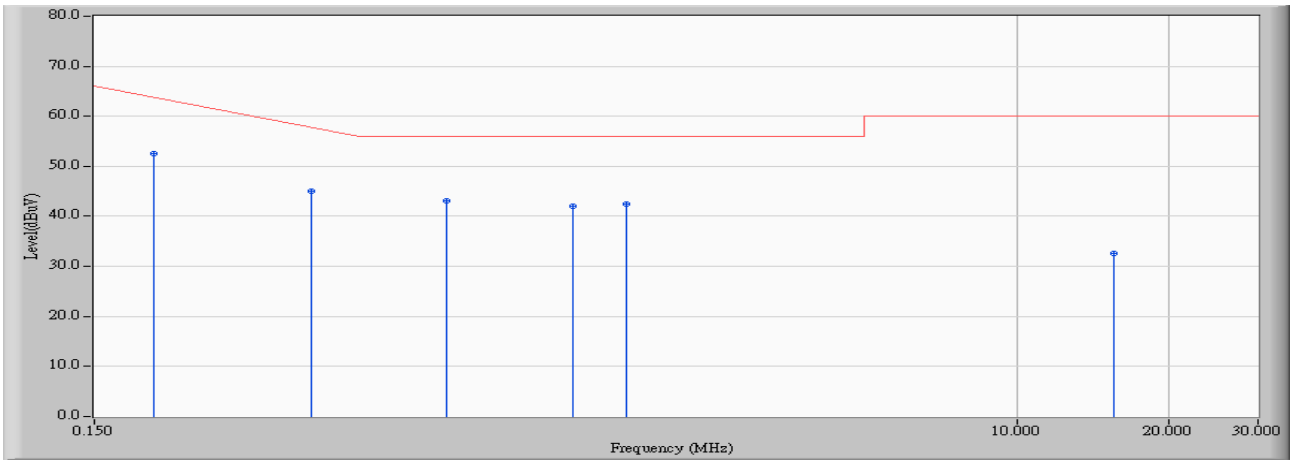
Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR-1	**Time : 2008/04/29 - 01:11**
Limit : CISPR_B_00M_QP	**Margin : 10**
EUT : Personal Computer	**Probe : LISN-N(023) - Line2**
Power : AC 230V/50Hz	**Note : MODE 2**



Site : SR-1	**Time : 2008/04/29 - 01:12**
Limit : CISPR_B_00M_QP	**Margin : 0**
EUT : Personal Computer	**Probe : LISN-N(023) - Line2**
Power : AC 230V/50Hz	**Note : MODE 2**

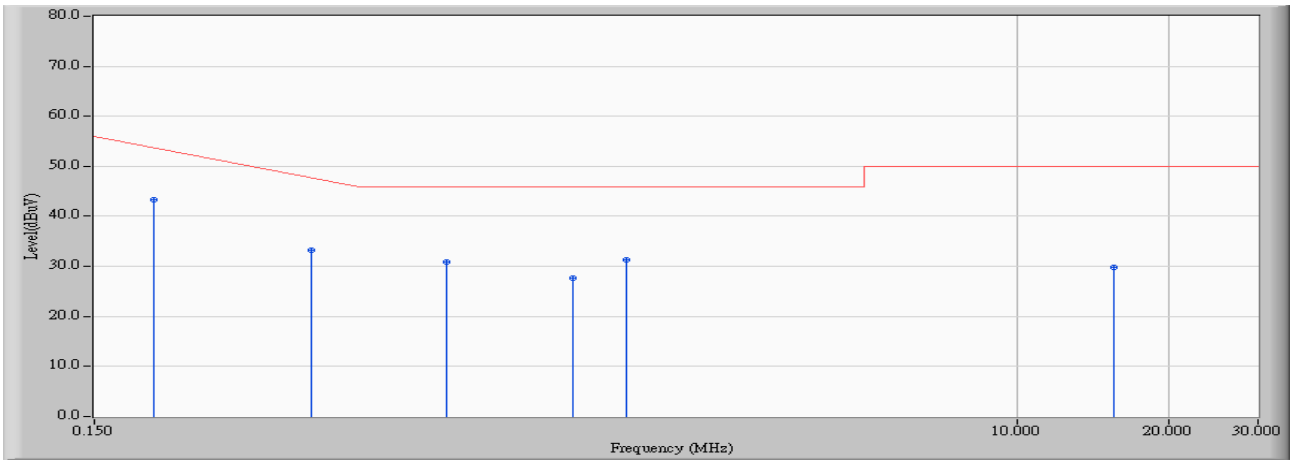


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.197	0.300	52.330	52.630	-12.027	64.657	QUASIPEAK
2		0.404	0.310	44.780	45.090	-13.653	58.743	QUASIPEAK
3		0.748	0.320	42.710	43.030	-12.970	56.000	QUASIPEAK
4		1.326	0.330	41.680	42.010	-13.990	56.000	QUASIPEAK
5		1.693	0.340	42.040	42.380	-13.620	56.000	QUASIPEAK
6		15.552	0.900	31.600	32.500	-27.500	60.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR-1	**Time : 2008/04/29 - 01:12**
Limit : CISPR_B_00M_AV	**Margin : 0**
EUT : Personal Computer	**Probe : LISN-N(023) - Line2**
Power : AC 230V/50Hz	**Note : MODE 2**

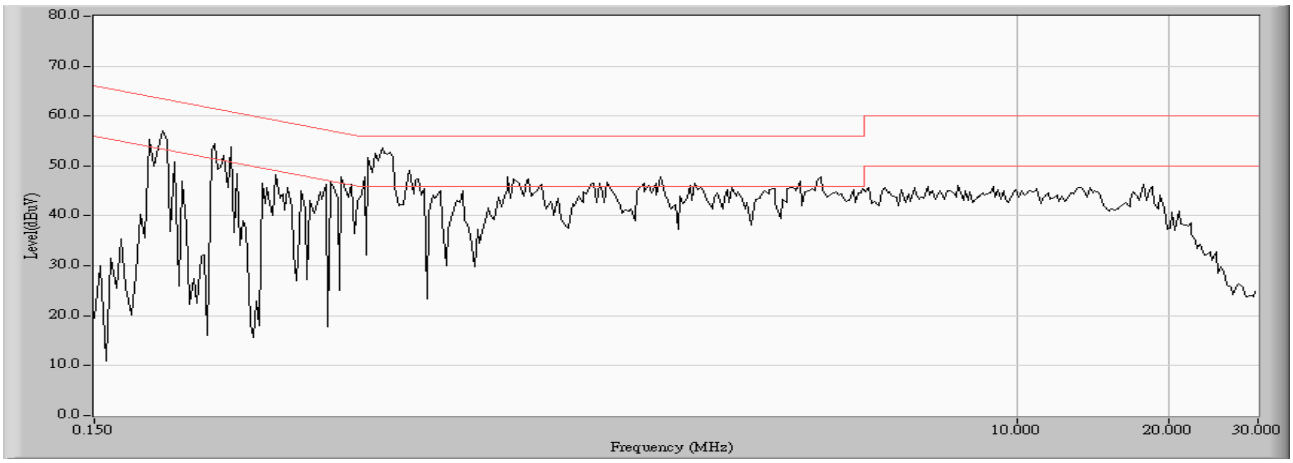


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.197	0.300	42.920	43.220	-11.437	54.657	AVERAGE
2		0.404	0.310	33.010	33.320	-15.423	48.743	AVERAGE
3		0.748	0.320	30.590	30.910	-15.090	46.000	AVERAGE
4		1.326	0.330	27.430	27.760	-18.240	46.000	AVERAGE
5		1.693	0.340	30.900	31.240	-14.760	46.000	AVERAGE
6		15.552	0.900	28.900	29.800	-20.200	50.000	AVERAGE

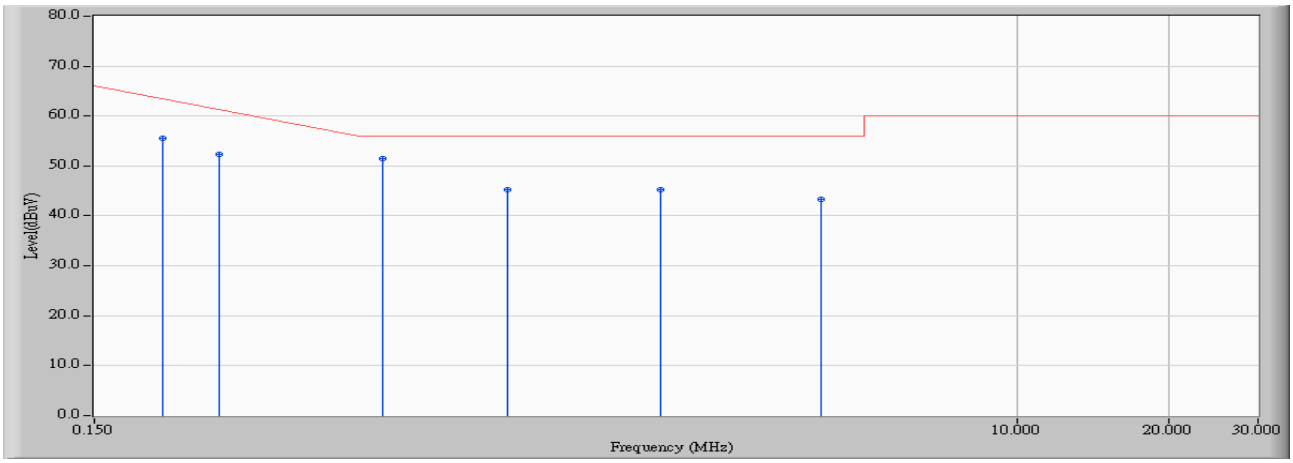
Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR-1	**Time : 2008/05/19 - 14:05**
Limit : CISPR_B_00M_QP	**Margin : 10**
EUT : Personal Computer	**Probe : LISN-L(023) - Line1**
Power : AC 230V/50Hz	**Note : MODE 3**



Site : SR-1	**Time : 2008/05/19 - 14:07**
Limit : CISPR_B_00M_QP	**Margin : 0**
EUT : Personal Computer	**Probe : LISN-L(023) - Line1**
Power : AC 230V/50Hz	**Note : MODE 3**

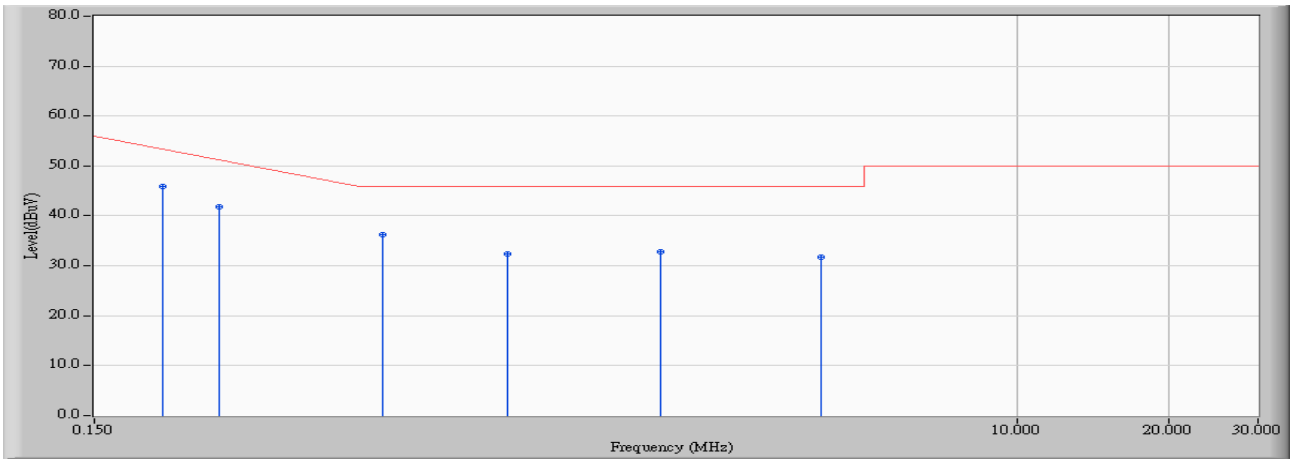


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.205	0.615	55.040	55.655	-8.774	64.429	QUASIPEAK
2		0.265	0.311	51.920	52.231	-10.483	62.714	QUASIPEAK
3	*	0.556	0.300	51.180	51.480	-4.520	56.000	QUASIPEAK
4		0.986	0.310	44.900	45.210	-10.790	56.000	QUASIPEAK
5		1.970	0.340	44.820	45.160	-10.840	56.000	QUASIPEAK
6		4.107	0.400	42.950	43.350	-12.650	56.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR-1	**Time : 2008/05/19 - 14:07**
Limit : CISPR_B_00M_AV	**Margin : 0**
EUT : Personal Computer	**Probe : LISN-L(023) - Line1**
Power : AC 230V/50Hz	**Note : MODE 3**

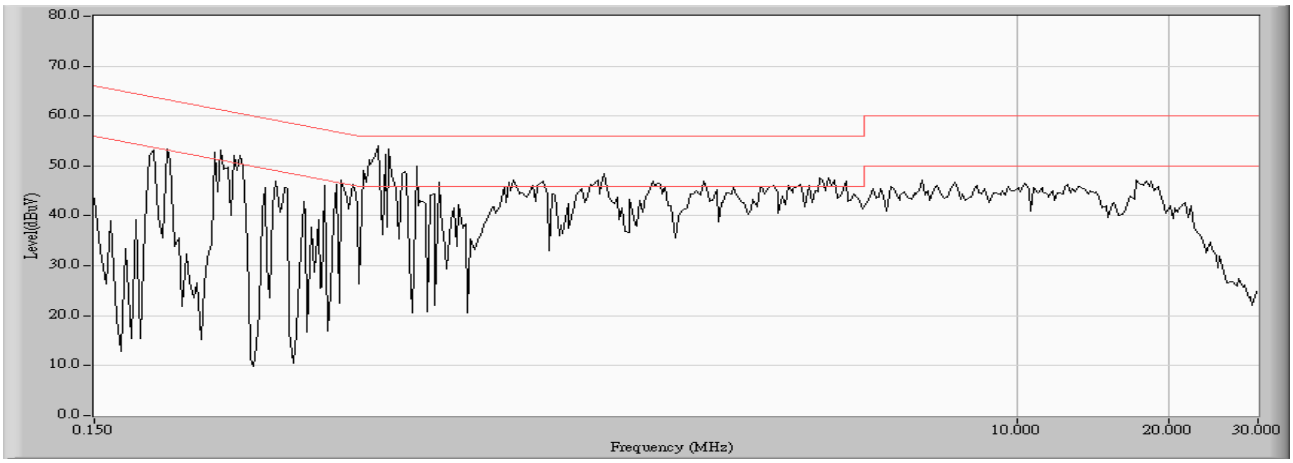


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1	*	0.205	0.615	45.210	45.825	-8.604	54.429	AVERAGE
2		0.265	0.311	41.520	41.831	-10.883	52.714	AVERAGE
3		0.556	0.300	36.040	36.340	-9.660	46.000	AVERAGE
4		0.986	0.310	32.110	32.420	-13.580	46.000	AVERAGE
5		1.970	0.340	32.540	32.880	-13.120	46.000	AVERAGE
6		4.107	0.400	31.430	31.830	-14.170	46.000	AVERAGE

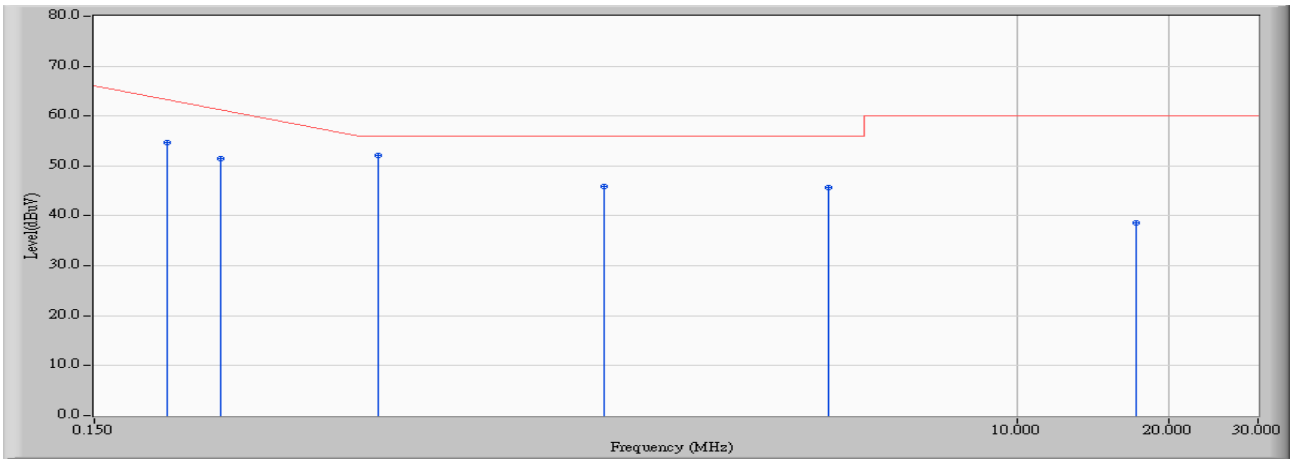
Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR-1	**Time : 2008/05/19 - 14:08**
Limit : CISPR_B_00M_QP	**Margin : 10**
EUT : Personal Computer	**Probe : LISN-N(023) - Line2**
Power : AC 230V/50Hz	**Note : MODE 3**



Site : SR-1	**Time : 2008/05/19 - 14:09**
Limit : CISPR_B_00M_QP	**Margin : 0**
EUT : Personal Computer	**Probe : LISN-N(023) - Line2**
Power : AC 230V/50Hz	**Note : MODE 3**

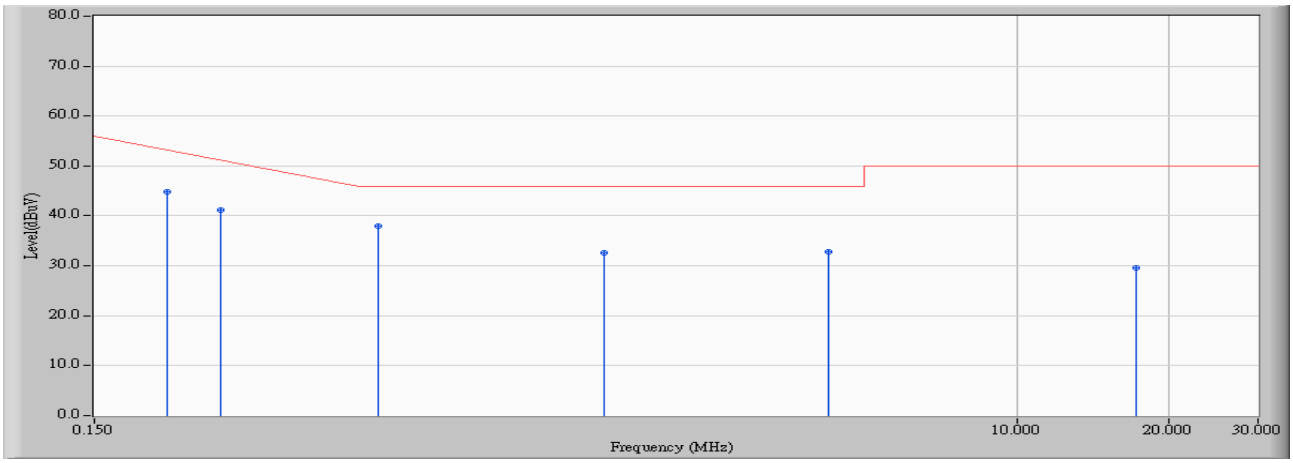


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.209	0.300	54.400	54.700	-9.614	64.314	QUASIPEAK
2		0.267	0.300	51.180	51.480	-11.177	62.657	QUASIPEAK
3	*	0.545	0.310	51.910	52.220	-3.780	56.000	QUASIPEAK
4		1.533	0.340	45.650	45.990	-10.010	56.000	QUASIPEAK
5		4.236	0.400	45.330	45.730	-10.270	56.000	QUASIPEAK
6		17.279	0.900	37.770	38.670	-21.330	60.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR-1	**Time : 2008/05/19 - 14:09**
Limit : CISPR_B_00M_AV	**Margin : 0**
EUT : Personal Computer	**Probe : LISN-N(023) - Line2**
Power : AC 230V/50Hz	**Note : MODE 3**



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.209	0.300	44.580	44.880	-9.434	54.314	AVERAGE
2		0.267	0.300	40.840	41.140	-11.517	52.657	AVERAGE
3	*	0.545	0.310	37.570	37.880	-8.120	46.000	AVERAGE
4		1.533	0.340	32.260	32.600	-13.400	46.000	AVERAGE
5		4.236	0.400	32.510	32.910	-13.090	46.000	AVERAGE
6		17.279	0.900	28.610	29.510	-20.490	50.000	AVERAGE

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

3.7. Test Photograph

Test Mode : Mode 1: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (LI SHIN)

Description : Front View of Conducted Test

Test Mode : Mode 1: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (LI SHIN)

Description : Back View of Conducted Test

Test Mode : Mode 2: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (DELTA)

Description : Front View of Conducted Test

Test Mode : Mode 2: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (DELTA)

Description : Back View of Conducted Test

Test Mode ： Mode 3: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (BesTec)

Description : Front View of Conducted Test

Test Mode : Mode 3: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (BesTec)

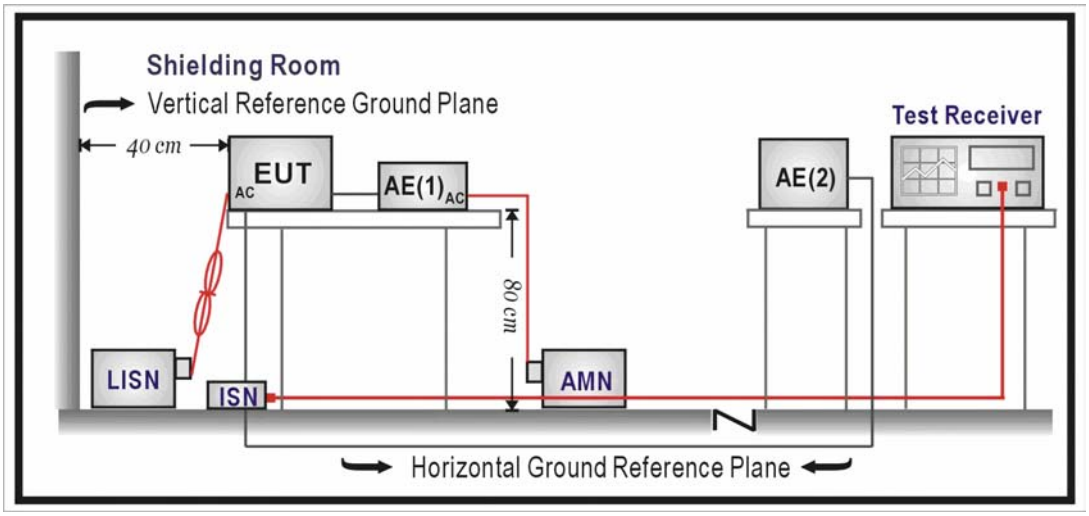
Description : Back View of Conducted Test

4. Conducted Emissions (Telecommunication Ports)

4.1. Test Specification

According to EMC Standard : EN 55022

4.2. Test Setup



4.3. Limit

Limits		
Frequency (MHz)	QP (dBuV)	AV (dBuV)
0.15 - 0.50	84 – 74	74 – 64
0.50 - 30	74	64

Remarks:

The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz~0.50 MHz.

4.4. Test Procedure

Telecommunication Port:

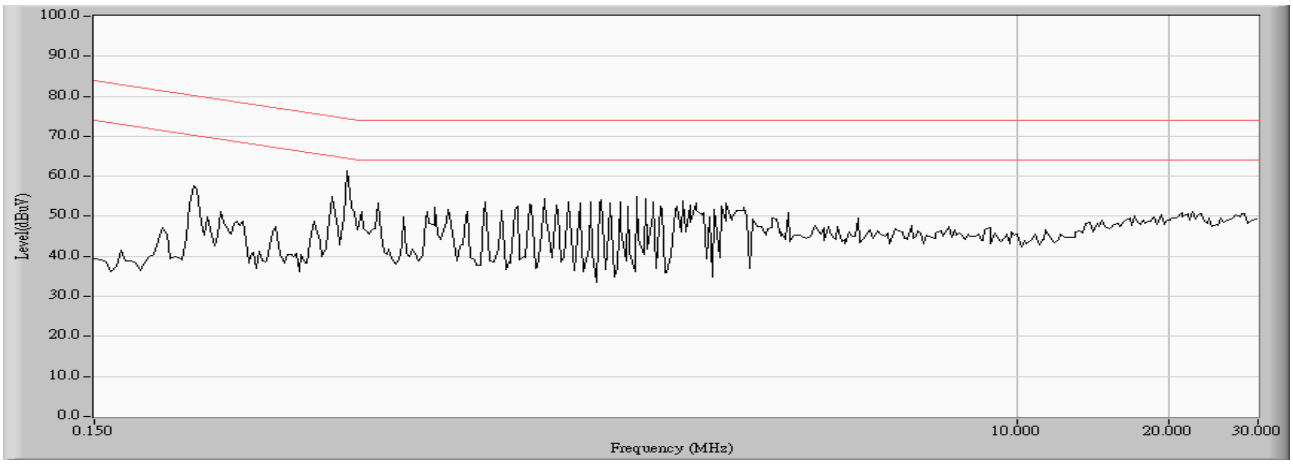
The mains voltage shall be supplied to the EUT via the LISN when the measurement of telecommunication port is performed. The common mode disturbances at the telecommunication port shall be connected to the ISN, which is 150 ohm impedance.
Both alternative cables are tested related to the LCL requested. The measurement range is from 150kHz to 30MHz. The bandwidth of measurement is set to 9kHz.
The 75dB LCL ISN is used for cat. 6 cable, the 65dB LCL ISN is used for cat. 5 cable, 55dB LCL ISN is used for cat. 3.

4.5. Deviation from Test Standard

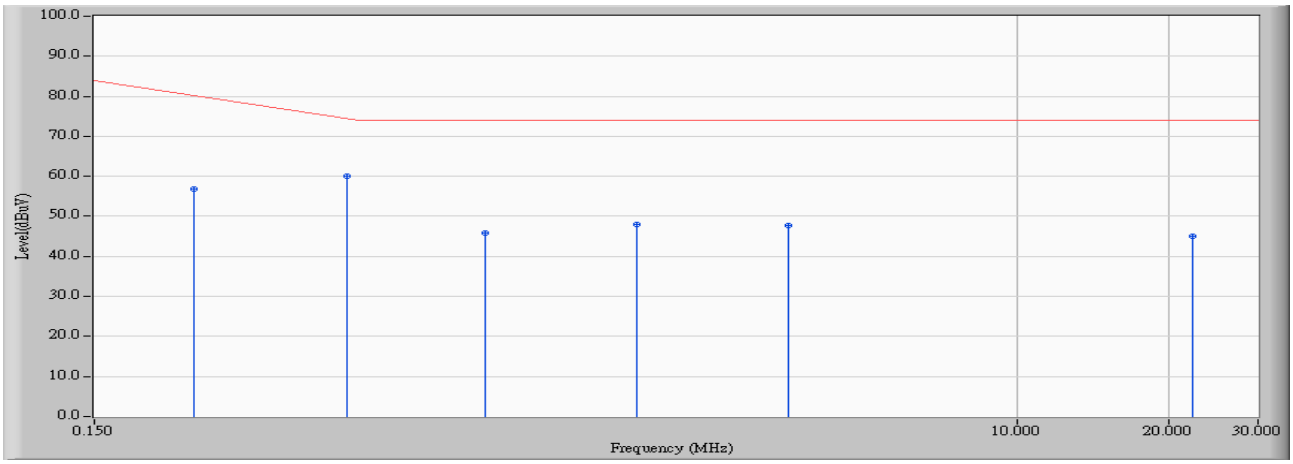
No deviation.

4.6. Test Result

Site : SR-1	**Time : 2008/04/29 - 02:13**
Limit : ISN_Voltage_B_00M_QP	**Margin : 10**
EUT : Personal Computer	**Probe : ISN-T8 - Line1**
Power : AC 230V/50Hz	**Note : MODE 1,ISN 1G VOL**



Site : SR-1	**Time : 2008/04/29 - 02:14**
Limit : ISN_Voltage_B_00M_QP	**Margin : 0**
EUT : Personal Computer	**Probe : ISN-T8 - Line1**
Power : AC 230V/50Hz	**Note : MODE 1,ISN 1G VOL**

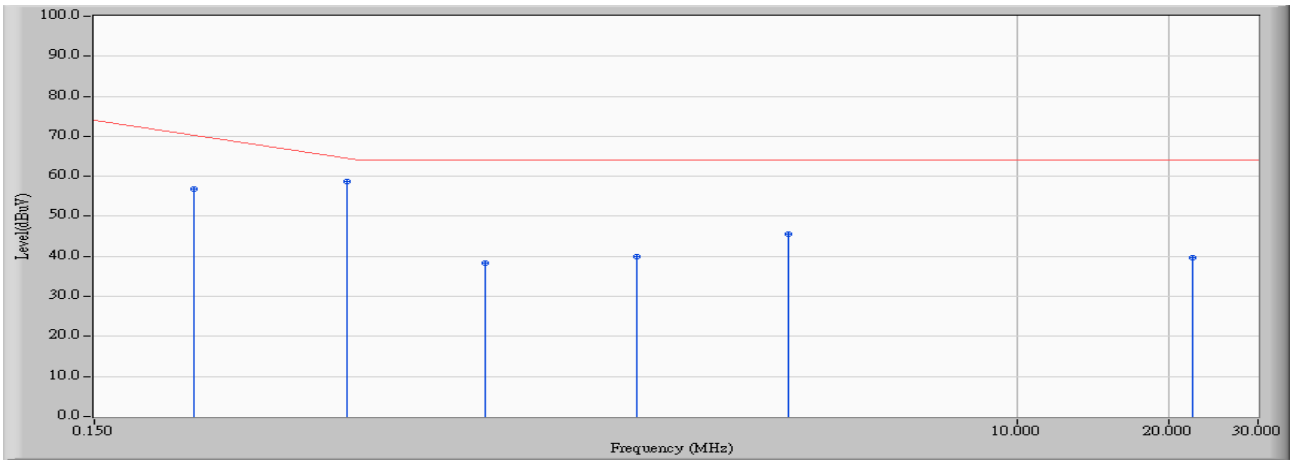


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.236	10.171	46.740	56.911	-24.632	81.543	QUASIPEAK
2	*	0.474	10.110	49.830	59.940	-14.803	74.743	QUASIPEAK
3		0.888	10.070	35.810	45.880	-28.120	74.000	QUASIPEAK
4		1.775	10.020	37.880	47.900	-26.100	74.000	QUASIPEAK
5		3.541	9.990	37.710	47.700	-26.300	74.000	QUASIPEAK
6		22.318	10.110	34.870	44.980	-29.020	74.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR-1	**Time : 2008/04/29 - 02:14**
Limit : ISN_Voltage_B_00M_AV	**Margin : 0**
EUT : Personal Computer	**Probe : ISN-T8 - Line1**
Power : AC 230V/50Hz	**Note : MODE 1,ISN 1G VOL**

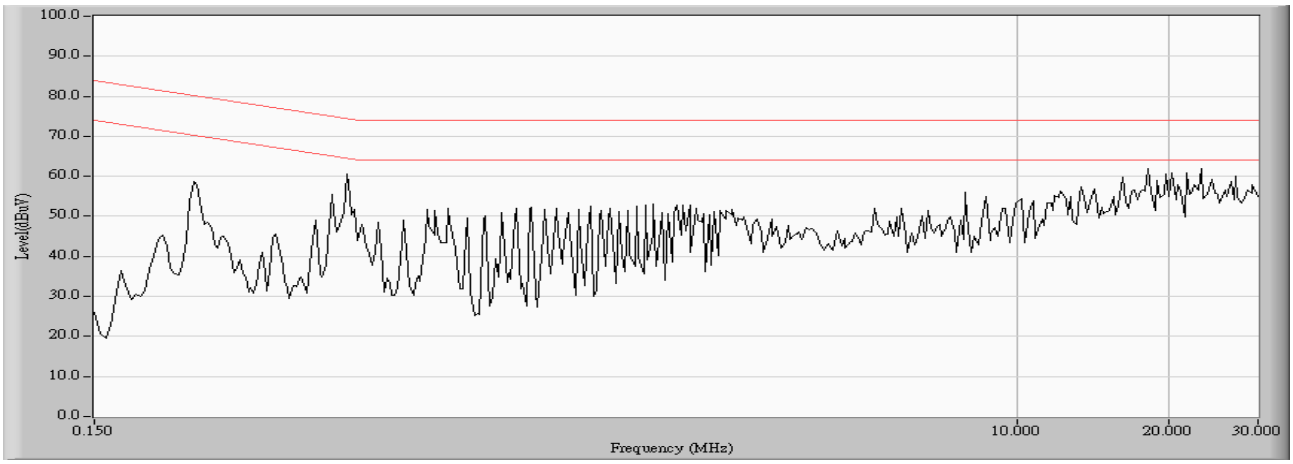


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.236	10.171	46.550	56.721	-14.822	71.543	AVERAGE
2	*	0.474	10.110	48.480	58.590	-6.153	64.743	AVERAGE
3		0.888	10.070	28.210	38.280	-25.720	64.000	AVERAGE
4		1.775	10.020	29.860	39.880	-24.120	64.000	AVERAGE
5		3.541	9.990	35.680	45.670	-18.330	64.000	AVERAGE
6		22.318	10.110	29.480	39.590	-24.410	64.000	AVERAGE

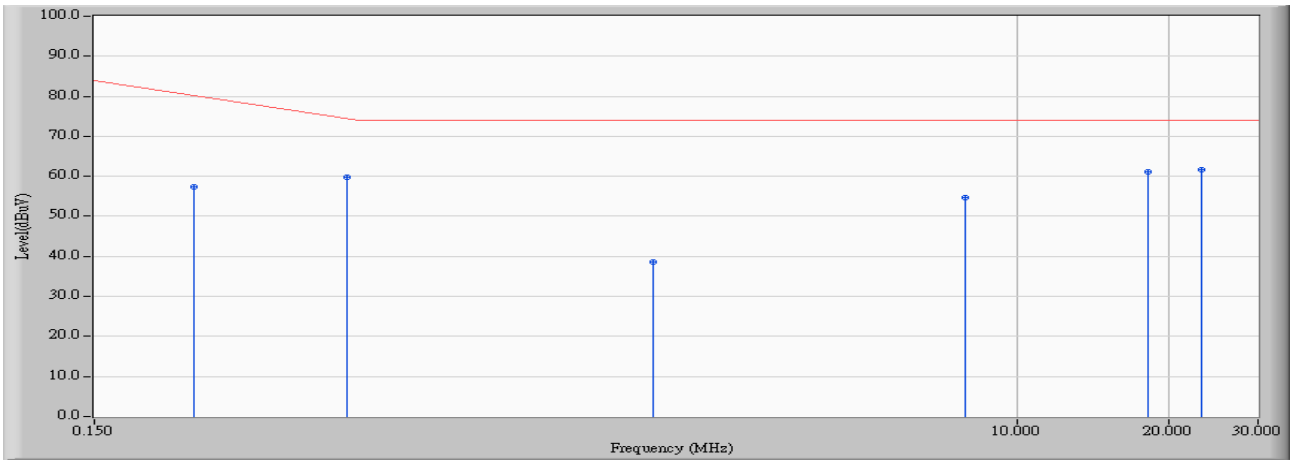
Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR-1	**Time : 2008/04/29 - 02:07**
Limit : ISN_Voltage_B_00M_QP	**Margin : 10**
EUT : Personal Computer	**Probe : ISN-T4 - Line1**
Power : AC 230V/50Hz	**Note : MODE 1,ISN 100Mbps**



Site : SR-1	**Time : 2008/04/29 - 02:09**
Limit : ISN_Voltage_B_00M_QP	**Margin : 0**
EUT : Personal Computer	**Probe : ISN-T4 - Line1**
Power : AC 230V/50Hz	**Note : MODE 1,ISN 100Mbps**

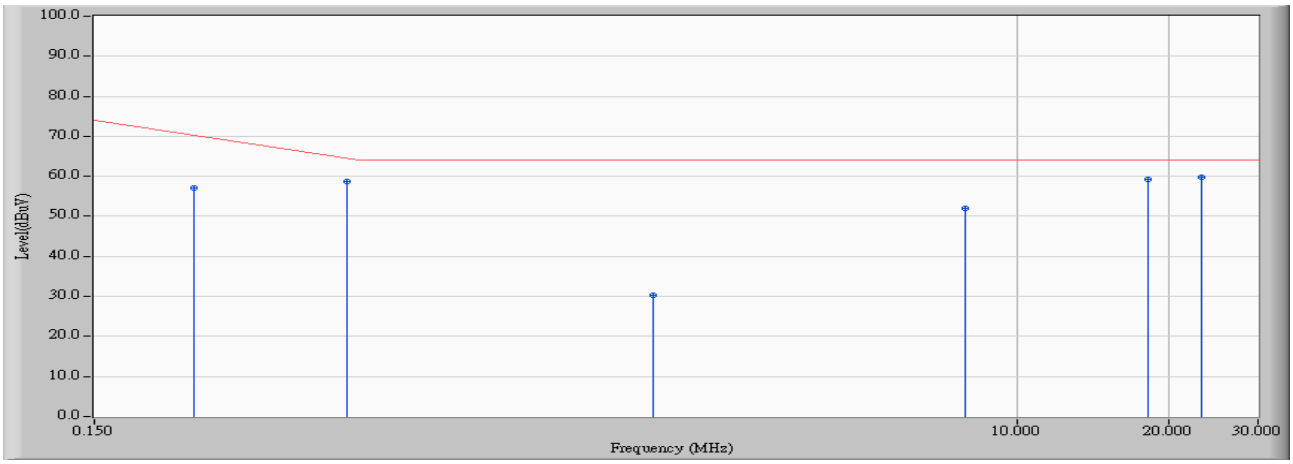


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.236	9.941	47.390	57.331	-24.212	81.543	QUASIPEAK
2		0.474	9.901	49.990	59.891	-14.852	74.743	QUASIPEAK
3		1.916	9.910	28.660	38.570	-35.430	74.000	QUASIPEAK
4		7.923	9.860	44.770	54.630	-19.370	74.000	QUASIPEAK
5		18.244	9.990	51.190	61.180	-12.820	74.000	QUASIPEAK
6	*	23.130	9.970	51.610	61.580	-12.420	74.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR-1	**Time : 2008/04/29 - 02:09**
Limit : ISN_Voltage_B_00M_AV	**Margin : 0**
EUT : Personal Computer	**Probe : ISN-T4 - Line1**
Power : AC 230V/50Hz	**Note : MODE 1,ISN 100Mbps**

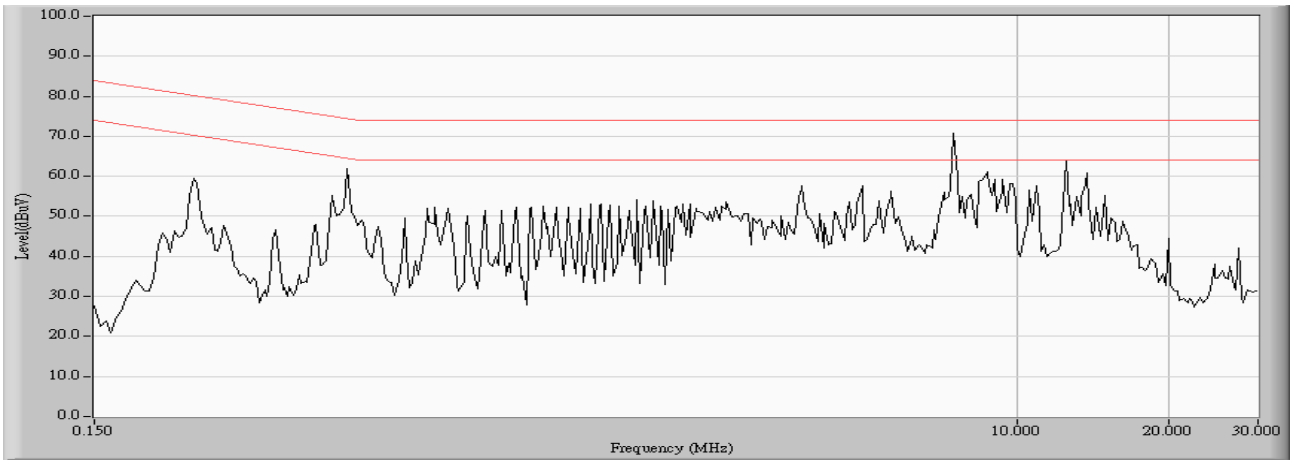


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.236	9.941	47.280	57.221	-14.322	71.543	AVERAGE
2		0.474	9.901	48.800	58.701	-6.042	64.743	AVERAGE
3		1.916	9.910	20.260	30.170	-33.830	64.000	AVERAGE
4		7.923	9.860	42.090	51.950	-12.050	64.000	AVERAGE
5		18.244	9.990	49.170	59.160	-4.840	64.000	AVERAGE
6	*	23.130	9.970	49.800	59.770	-4.230	64.000	AVERAGE

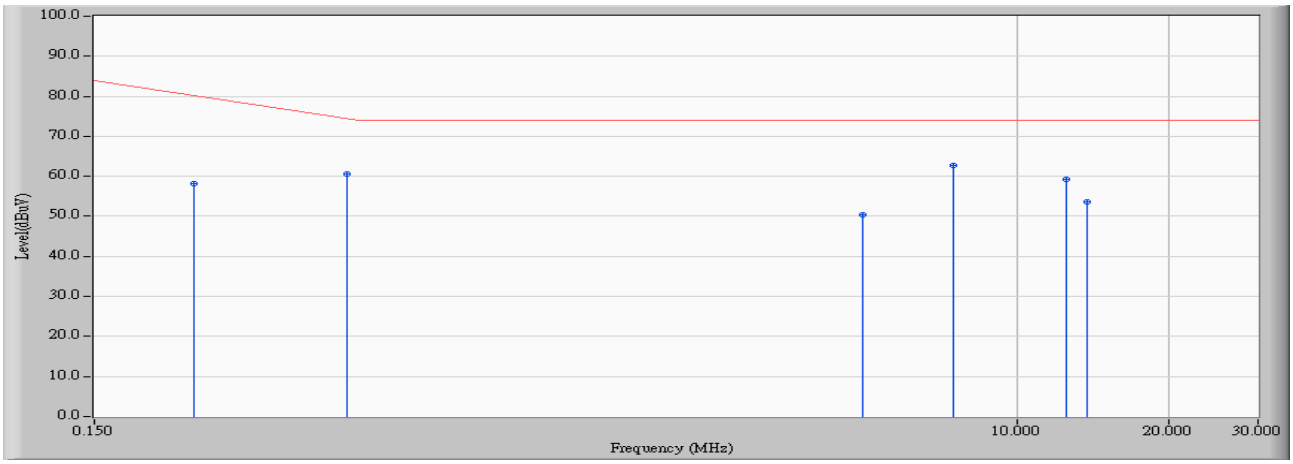
Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR-1	**Time : 2008/04/29 - 02:04**
Limit : ISN_Voltage_B_00M_QP	**Margin : 10**
EUT : Personal Computer	**Probe : ISN-T4 - Line1**
Power : AC 230V/50Hz	**Note : MODE 1,ISN 10Mbps**



Site : SR-1	**Time : 2008/04/29 - 02:05**
Limit : ISN_Voltage_B_00M_QP	**Margin : 0**
EUT : Personal Computer	**Probe : ISN-T4 - Line1**
Power : AC 230V/50Hz	**Note : MODE 1,ISN 10Mbps**

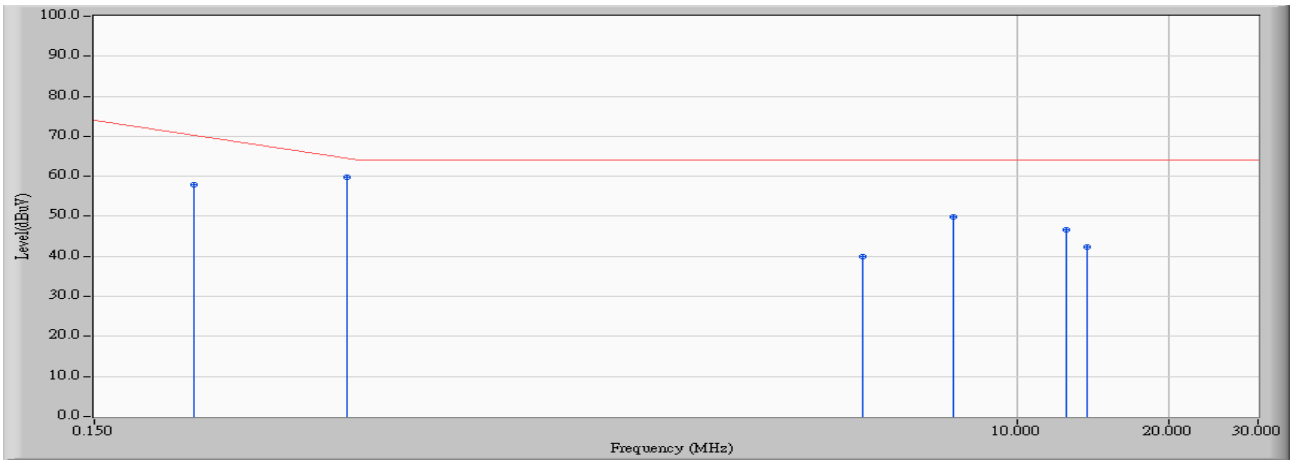


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.236	9.941	48.240	58.181	-23.362	81.543	QUASIPEAK
2		0.474	9.901	50.770	60.671	-14.072	74.743	QUASIPEAK
3		4.947	9.880	40.500	50.380	-23.620	74.000	QUASIPEAK
4	*	7.502	9.860	52.920	62.780	-11.220	74.000	QUASIPEAK
5		12.502	9.953	49.240	59.193	-14.807	74.000	QUASIPEAK
6		13.752	10.020	43.480	53.500	-20.500	74.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR-1	**Time : 2008/04/29 - 02:05**
Limit : ISN_Voltage_B_00M_AV	**Margin : 0**
EUT : Personal Computer	**Probe : ISN-T4 - Line1**
Power : AC 230V/50Hz	**Note : MODE 1,ISN 10Mbps**

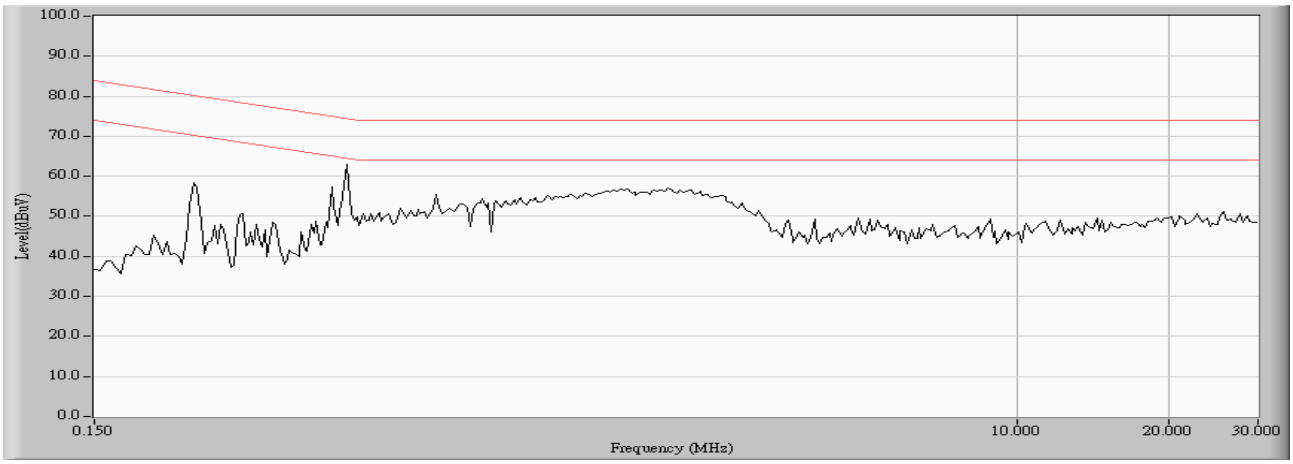


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.236	9.941	48.050	57.991	-13.552	71.543	AVERAGE
2	*	0.474	9.901	49.760	59.661	-5.082	64.743	AVERAGE
3		4.947	9.880	30.100	39.980	-24.020	64.000	AVERAGE
4		7.502	9.860	39.890	49.750	-14.250	64.000	AVERAGE
5		12.502	9.953	36.820	46.773	-17.227	64.000	AVERAGE
6		13.752	10.020	32.470	42.490	-21.510	64.000	AVERAGE

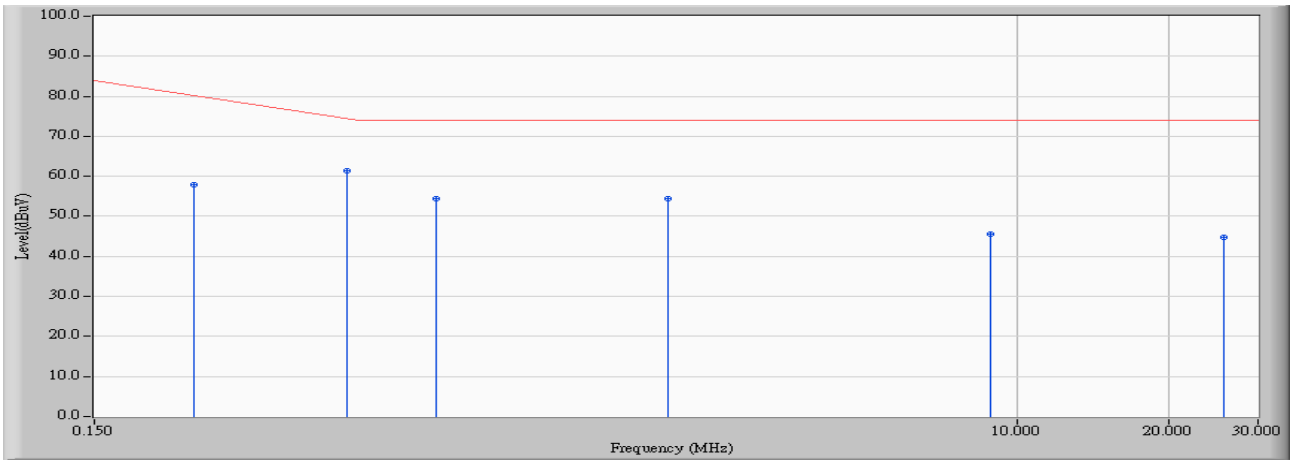
Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR-1	**Time : 2008/04/29 - 01:28**
Limit : ISN_Voltage_B_00M_QP	**Margin : 10**
EUT : Personal Computer	**Probe : ISN-T8 - Line1**
Power : AC 230V/50Hz	**Note : MODE 2,ISN 1G VOL**



Site : SR-1	**Time : 2008/04/29 - 01:30**
Limit : ISN_Voltage_B_00M_QP	**Margin : 0**
EUT : Personal Computer	**Probe : ISN-T8 - Line1**
Power : AC 230V/50Hz	**Note : MODE 2,ISN 1G VOL**

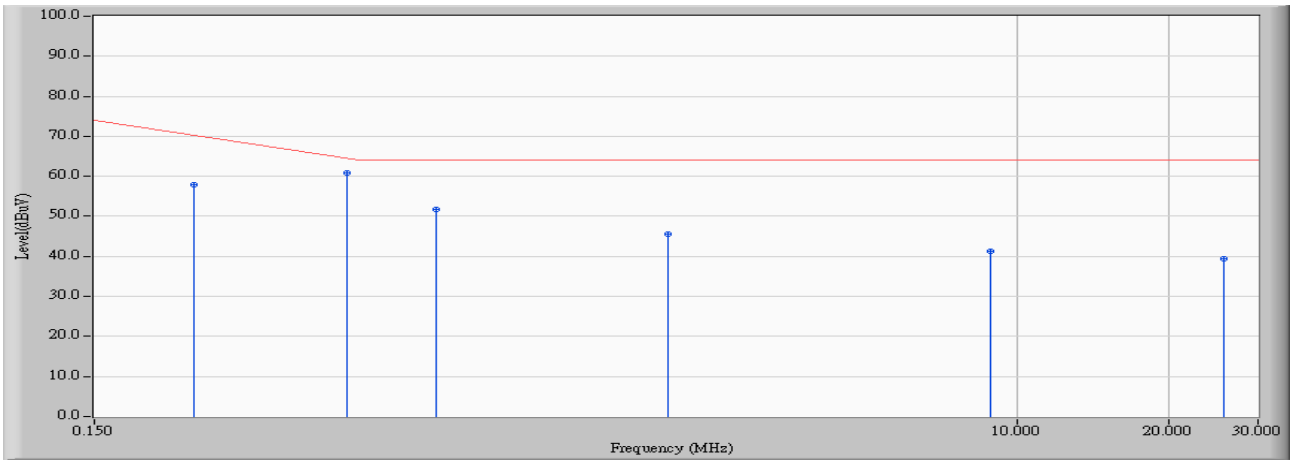


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.236	10.171	47.660	57.831	-23.712	81.543	QUASIPEAK
2	*	0.474	10.110	51.210	61.320	-13.423	74.743	QUASIPEAK
3		0.713	10.080	44.420	54.500	-19.500	74.000	QUASIPEAK
4		2.045	10.010	44.330	54.340	-19.660	74.000	QUASIPEAK
5		8.849	9.990	35.560	45.550	-28.450	74.000	QUASIPEAK
6		25.677	10.080	34.660	44.740	-29.260	74.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR-1	**Time : 2008/04/29 - 01:30**
Limit : ISN_Voltage_B_00M_AV	**Margin : 0**
EUT : Personal Computer	**Probe : ISN-T8 - Line1**
Power : AC 230V/50Hz	**Note : MODE 2,ISN 1G VOL**

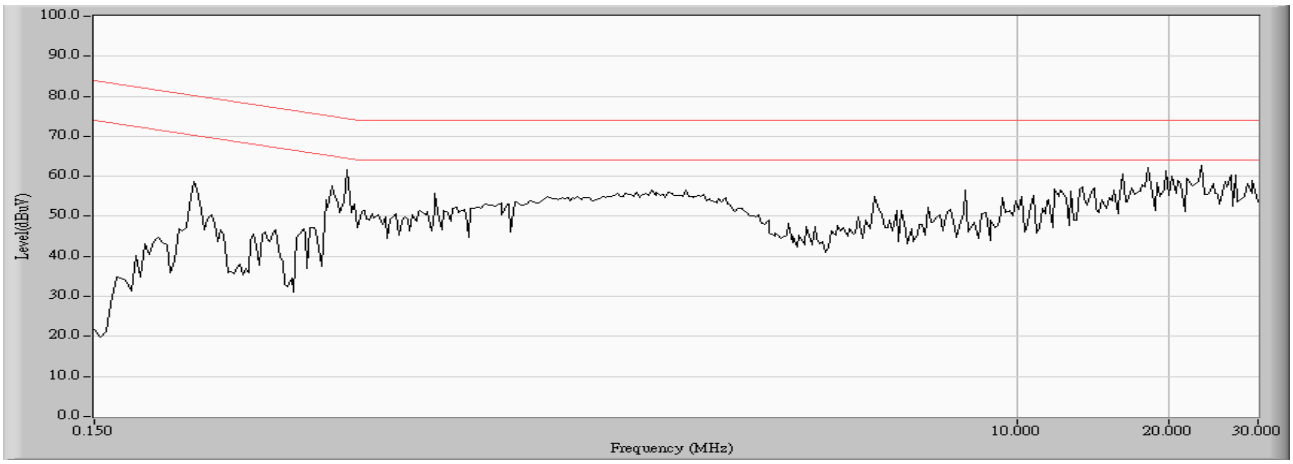


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.236	10.171	47.650	57.821	-13.722	71.543	AVERAGE
2	*	0.474	10.110	50.770	60.880	-3.863	64.743	AVERAGE
3		0.713	10.080	41.670	51.750	-12.250	64.000	AVERAGE
4		2.045	10.010	35.640	45.650	-18.350	64.000	AVERAGE
5		8.849	9.990	31.240	41.230	-22.770	64.000	AVERAGE
6		25.677	10.080	29.200	39.280	-24.720	64.000	AVERAGE

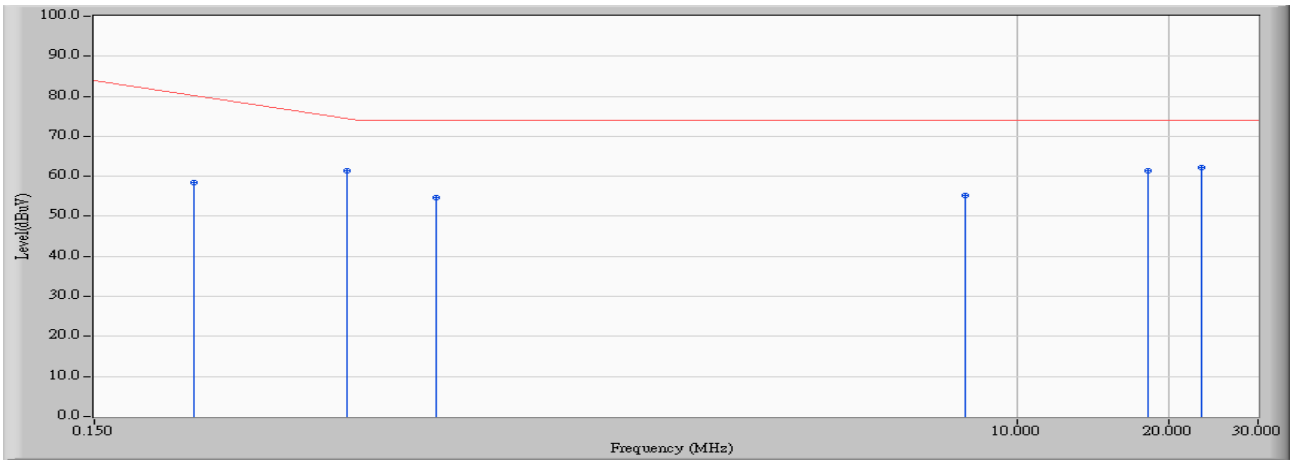
Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR-1	**Time : 2008/04/29 - 01:35**
Limit : ISN_Voltage_B_00M_QP	**Margin : 10**
EUT : Personal Computer	**Probe : ISN-T4 - Line1**
Power : AC 230V/50Hz	**Note : MODE 2,ISN 100Mbps**



Site : SR-1	**Time : 2008/04/29 - 01:37**
Limit : ISN_Voltage_B_00M_QP	**Margin : 0**
EUT : Personal Computer	**Probe : ISN-T4 - Line1**
Power : AC 230V/50Hz	**Note : MODE 2,ISN 100Mbps**

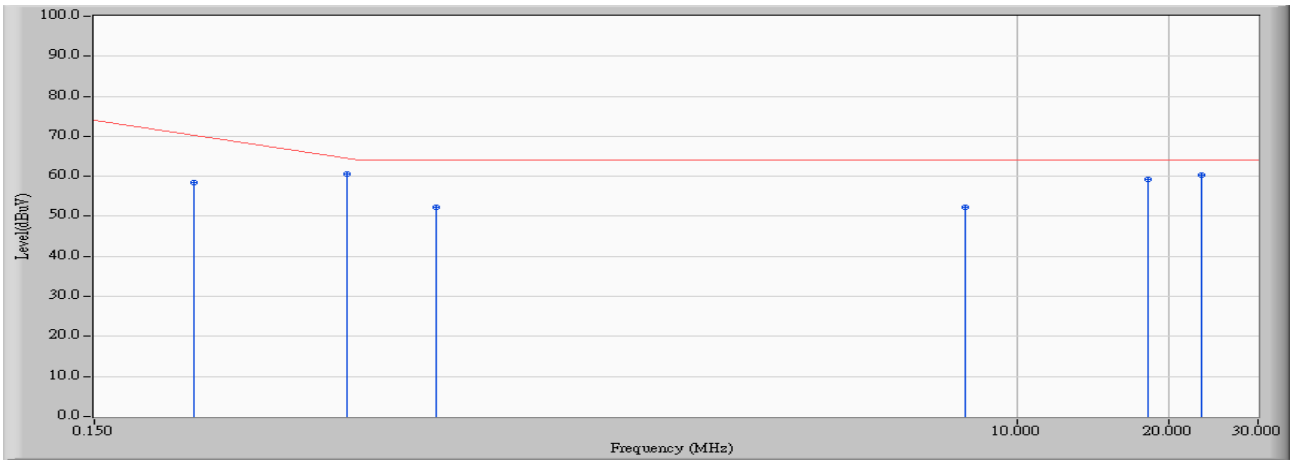


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.236	9.941	48.390	58.331	-23.212	81.543	QUASIPEAK
2		0.474	9.901	51.570	61.471	-13.272	74.743	QUASIPEAK
3		0.709	9.900	44.710	54.610	-19.390	74.000	QUASIPEAK
4		7.923	9.860	45.270	55.130	-18.870	74.000	QUASIPEAK
5		18.244	9.990	51.330	61.320	-12.680	74.000	QUASIPEAK
6	*	23.127	9.970	52.300	62.270	-11.730	74.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR-1	**Time : 2008/04/29 - 01:37**
Limit : ISN_Voltage_B_00M_AV	**Margin : 0**
EUT : Personal Computer	**Probe : ISN-T4 - Line1**
Power : AC 230V/50Hz	**Note : MODE 2,ISN 100Mbps**

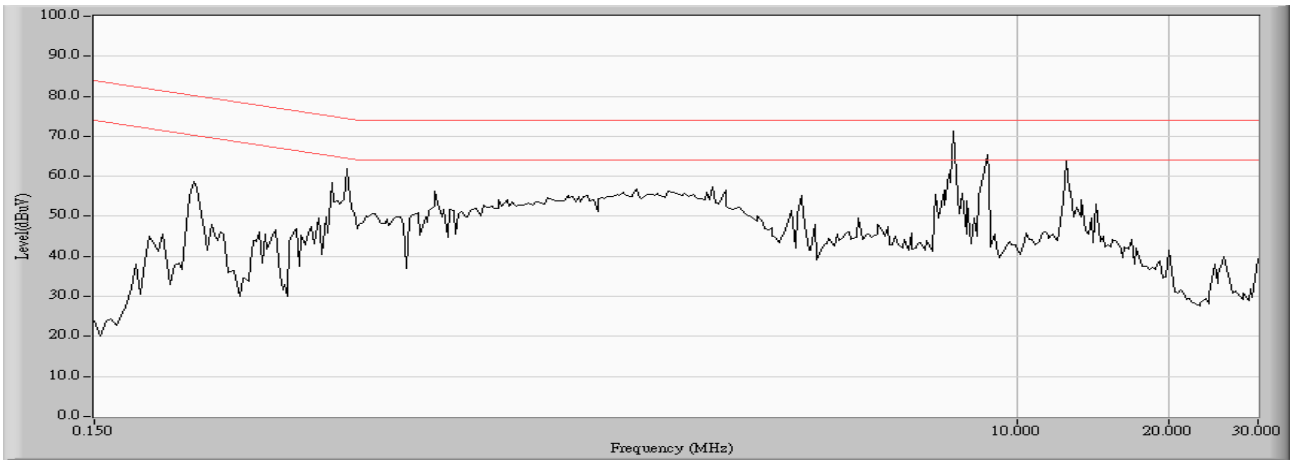


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.236	9.941	48.380	58.321	-13.222	71.543	AVERAGE
2		0.474	9.901	50.700	60.601	-4.142	64.743	AVERAGE
3		0.709	9.900	42.460	52.360	-11.640	64.000	AVERAGE
4		7.923	9.860	42.500	52.360	-11.640	64.000	AVERAGE
5		18.244	9.990	49.330	59.320	-4.680	64.000	AVERAGE
6	*	23.127	9.970	50.410	60.380	-3.620	64.000	AVERAGE

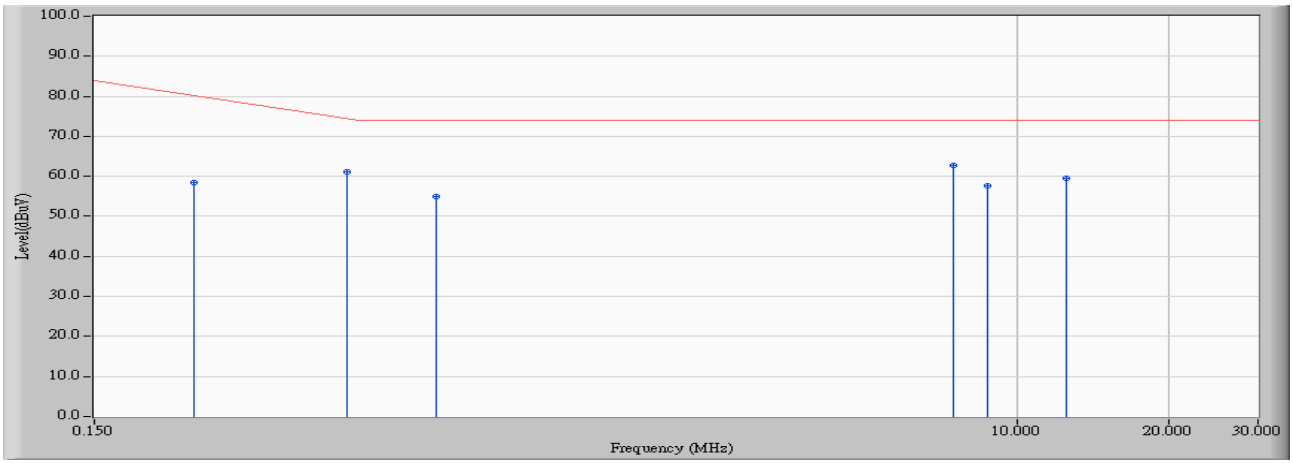
Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR-1	**Time : 2008/04/29 - 01:43**
Limit : ISN_Voltage_B_00M_QP	**Margin : 10**
EUT : Personal Computer	**Probe : ISN-T4 - Line1**
Power : AC 230V/50Hz	**Note : MODE 2,ISN 10Mbps**



Site : SR-1	**Time : 2008/04/29 - 01:45**
Limit : ISN_Voltage_B_00M_QP	**Margin : 0**
EUT : Personal Computer	**Probe : ISN-T4 - Line1**
Power : AC 230V/50Hz	**Note : MODE 2,ISN 10Mbps**

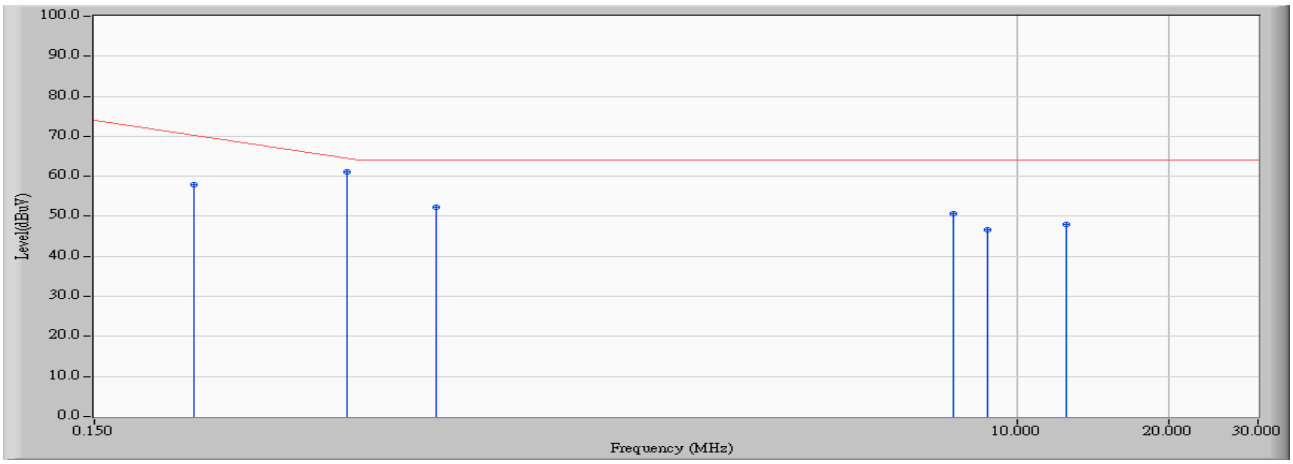


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.236	9.941	48.500	58.441	-23.102	81.543	QUASIPEAK
2		0.474	9.901	51.230	61.131	-13.612	74.743	QUASIPEAK
3		0.709	9.900	45.190	55.090	-18.910	74.000	QUASIPEAK
4	*	7.502	9.860	52.980	62.840	-11.160	74.000	QUASIPEAK
5		8.752	9.860	47.760	57.620	-16.380	74.000	QUASIPEAK
6		12.502	9.953	49.570	59.523	-14.477	74.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR-1	**Time : 2008/04/29 - 01:45**
Limit : ISN_Voltage_B_00M_AV	**Margin : 0**
EUT : Personal Computer	**Probe : ISN-T4 - Line1**
Power : AC 230V/50Hz	**Note : MODE 2,ISN 10Mbps**

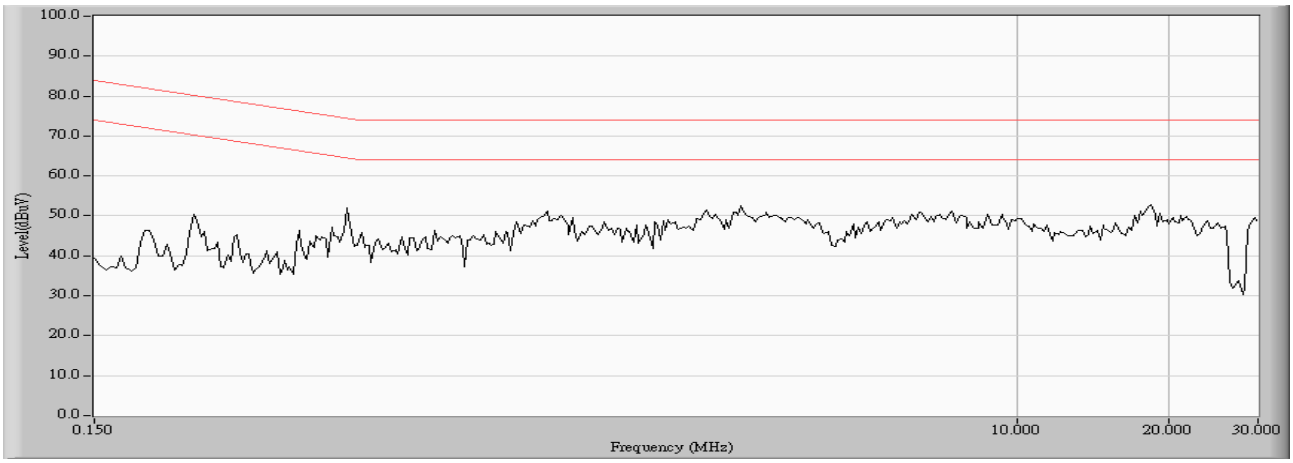


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.236	9.941	48.050	57.991	-13.552	71.543	AVERAGE
2	*	0.474	9.901	51.120	61.021	-3.722	64.743	AVERAGE
3		0.709	9.900	42.460	52.360	-11.640	64.000	AVERAGE
4		7.502	9.860	40.760	50.620	-13.380	64.000	AVERAGE
5		8.752	9.860	36.730	46.590	-17.410	64.000	AVERAGE
6		12.502	9.953	37.920	47.873	-16.127	64.000	AVERAGE

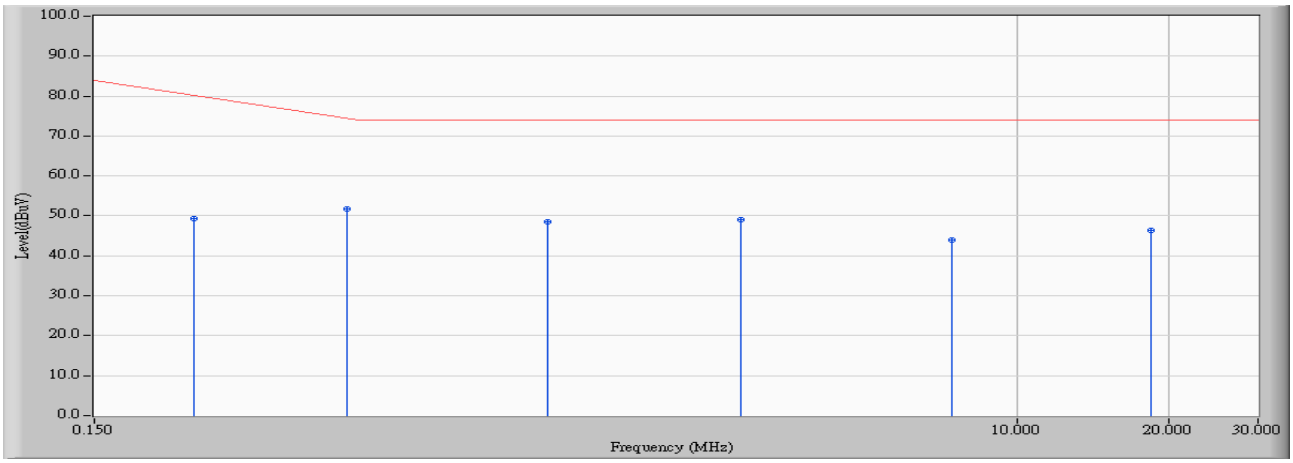
Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR-1	**Time : 2008/05/19 - 11:55**
Limit : ISN_Voltage_B_00M_QP	**Margin : 10**
EUT : Personal Computer	**Probe : ISN-T8 - Line1**
Power : AC 230V/50Hz	**Note : MODE 3,ISN 1G VOL**



Site : SR-1	**Time : 2008/05/19 - 11:57**
Limit : ISN_Voltage_B_00M_QP	**Margin : 0**
EUT : Personal Computer	**Probe : ISN-T8 - Line1**
Power : AC 230V/50Hz	**Note : MODE 3,ISN 1G VOL**

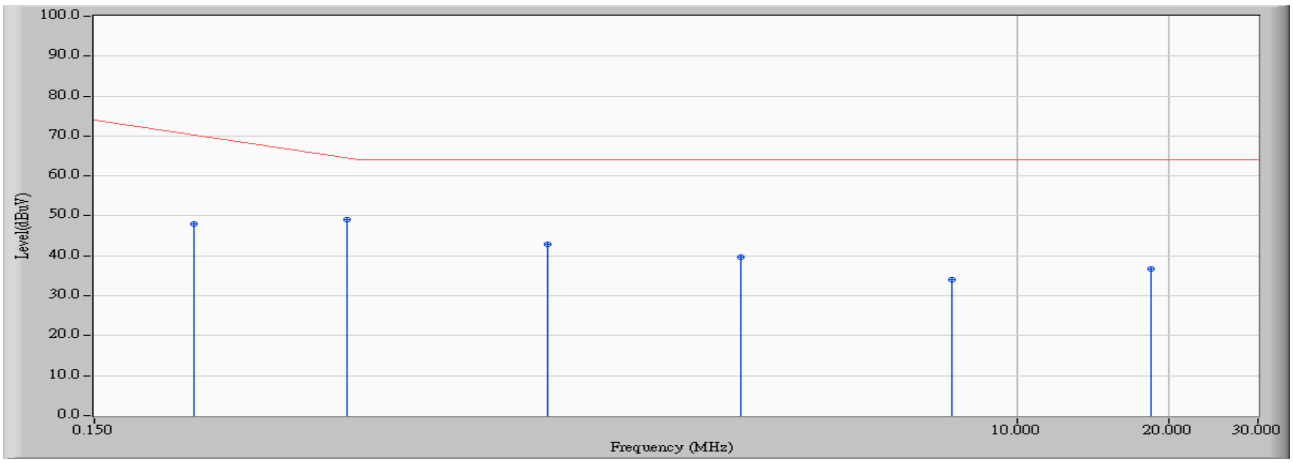


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.236	10.171	39.270	49.441	-32.102	81.543	QUASIPEAK
2	*	0.474	10.110	41.520	51.630	-23.113	74.743	QUASIPEAK
3		1.181	10.050	38.430	48.480	-25.520	74.000	QUASIPEAK
4		2.845	10.000	39.090	49.090	-24.910	74.000	QUASIPEAK
5		7.459	9.980	34.100	44.080	-29.920	74.000	QUASIPEAK
6		18.396	10.150	36.110	46.260	-27.740	74.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR-1	**Time : 2008/05/19 - 11:57**
Limit : ISN_Voltage_B_00M_AV	**Margin : 0**
EUT : Personal Computer	**Probe : ISN-T8 - Line1**
Power : AC 230V/50Hz	**Note : MODE 3,ISN 1G VOL**

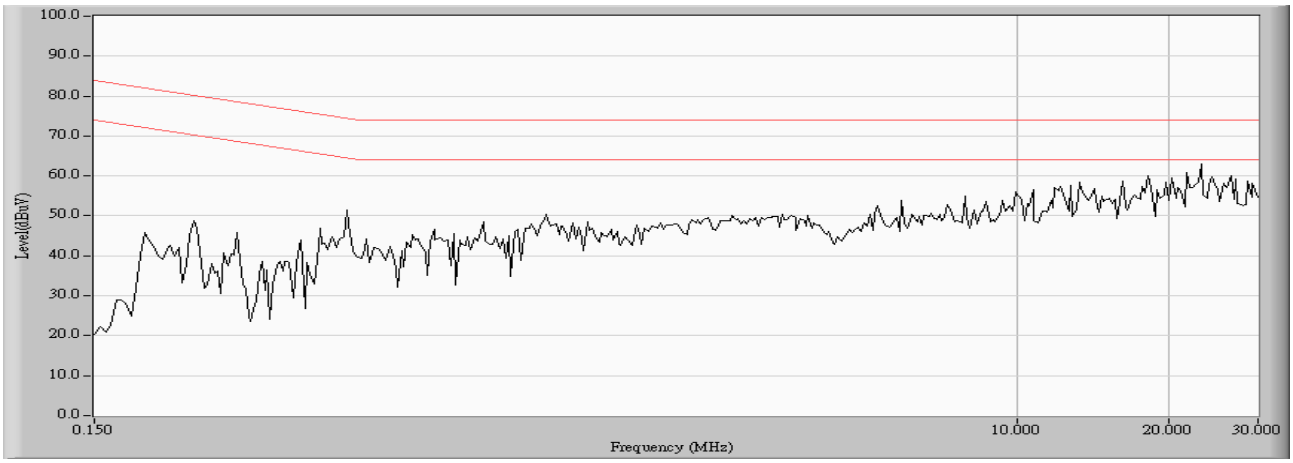


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.236	10.171	37.860	48.031	-23.512	71.543	AVERAGE
2	*	0.474	10.110	38.880	48.990	-15.753	64.743	AVERAGE
3		1.181	10.050	32.740	42.790	-21.210	64.000	AVERAGE
4		2.845	10.000	29.790	39.790	-24.210	64.000	AVERAGE
5		7.459	9.980	24.010	33.990	-30.010	64.000	AVERAGE
6		18.396	10.150	26.690	36.840	-27.160	64.000	AVERAGE

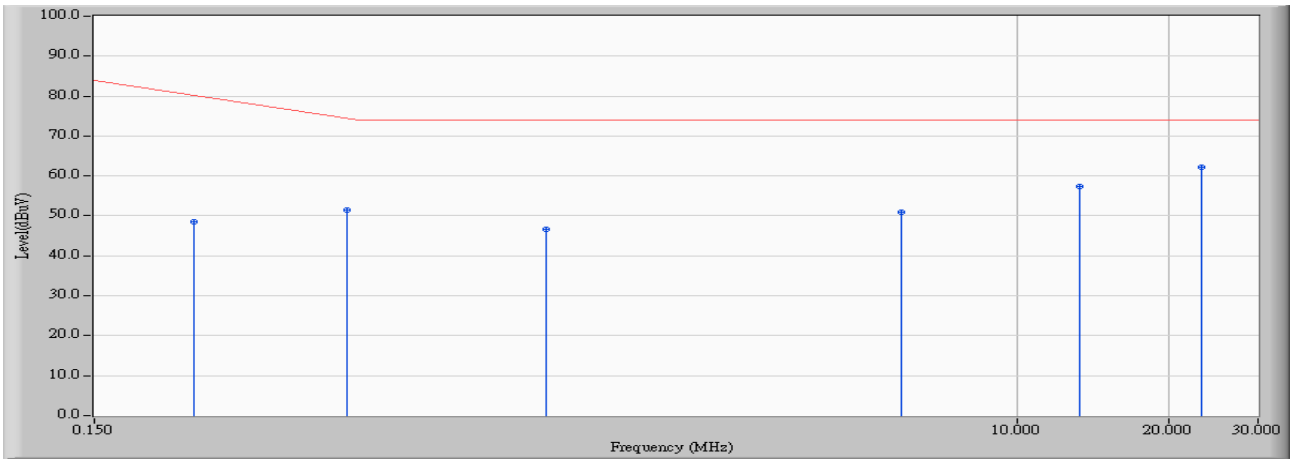
Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR-1	**Time : 2008/05/19 - 11:44**
Limit : ISN_Voltage_B_00M_QP	**Margin : 10**
EUT : Personal Computer	**Probe : ISN-T4 - Line1**
Power : AC 230V/50Hz	**Note : MODE 3,ISN 100Mbps**



Site : SR-1	**Time : 2008/05/19 - 11:47**
Limit : ISN_Voltage_B_00M_QP	**Margin : 0**
EUT : Personal Computer	**Probe : ISN-T4 - Line1**
Power : AC 230V/50Hz	**Note : MODE 3,ISN 100Mbps**

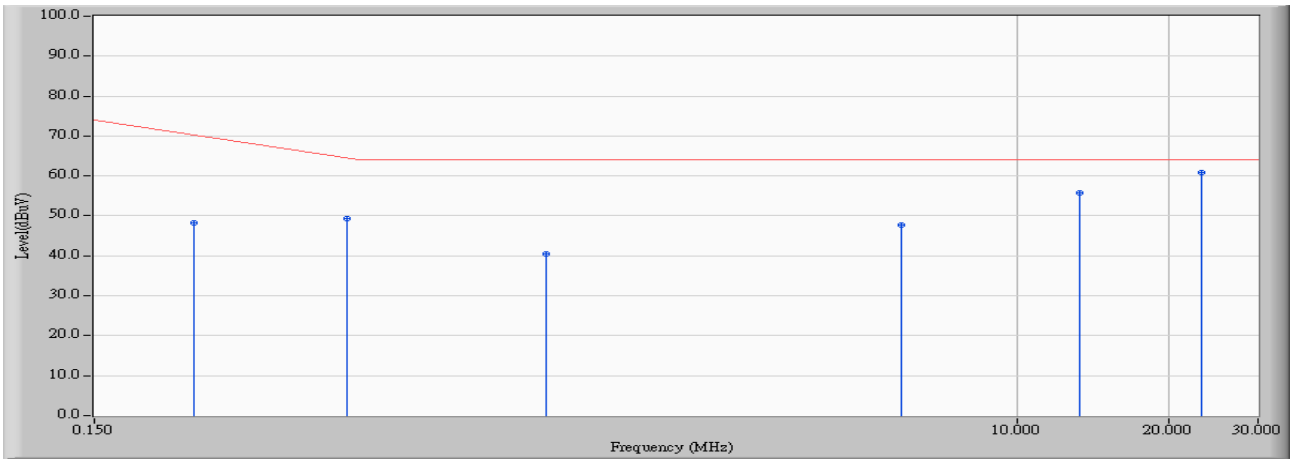


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.236	9.941	38.470	48.411	-33.132	81.543	QUASIPEAK
2		0.474	9.901	41.480	51.381	-23.362	74.743	QUASIPEAK
3		1.177	9.900	36.680	46.580	-27.420	74.000	QUASIPEAK
4		5.908	9.870	40.990	50.860	-23.140	74.000	QUASIPEAK
5		13.357	10.020	47.230	57.250	-16.750	74.000	QUASIPEAK
6	*	23.127	9.970	52.150	62.120	-11.880	74.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR-1	**Time : 2008/05/19 - 11:47**
Limit : ISN_Voltage_B_00M_AV	**Margin : 0**
EUT : Personal Computer	**Probe : ISN-T4 - Line1**
Power : AC 230V/50Hz	**Note : MODE 3,ISN 100Mbps**

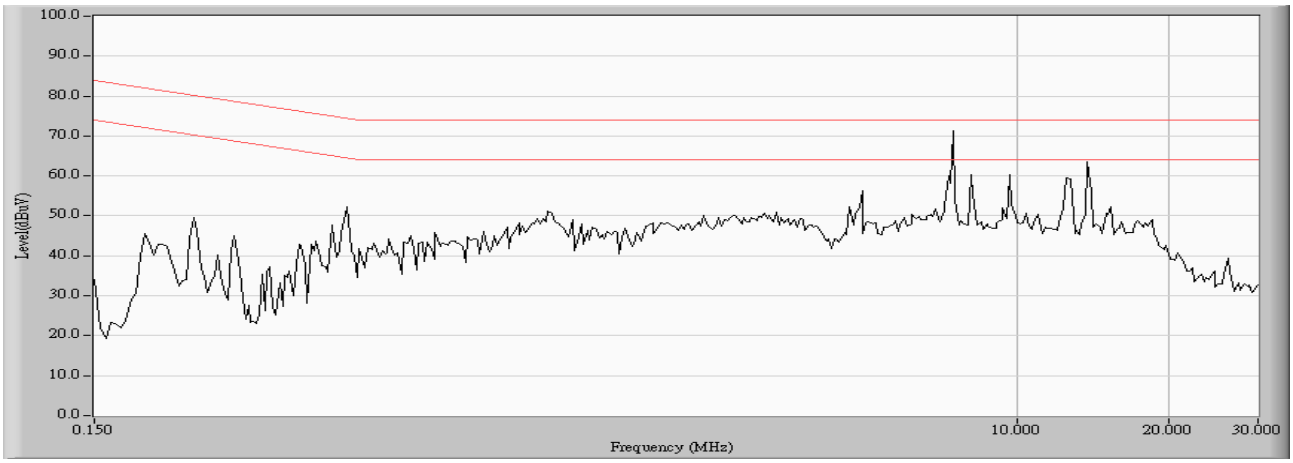


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.236	9.941	38.440	48.381	-23.162	71.543	AVERAGE
2		0.474	9.901	39.400	49.301	-15.442	64.743	AVERAGE
3		1.177	9.900	30.480	40.380	-23.620	64.000	AVERAGE
4		5.908	9.870	37.790	47.660	-16.340	64.000	AVERAGE
5		13.357	10.020	45.860	55.880	-8.120	64.000	AVERAGE
6	*	23.127	9.970	50.800	60.770	-3.230	64.000	AVERAGE

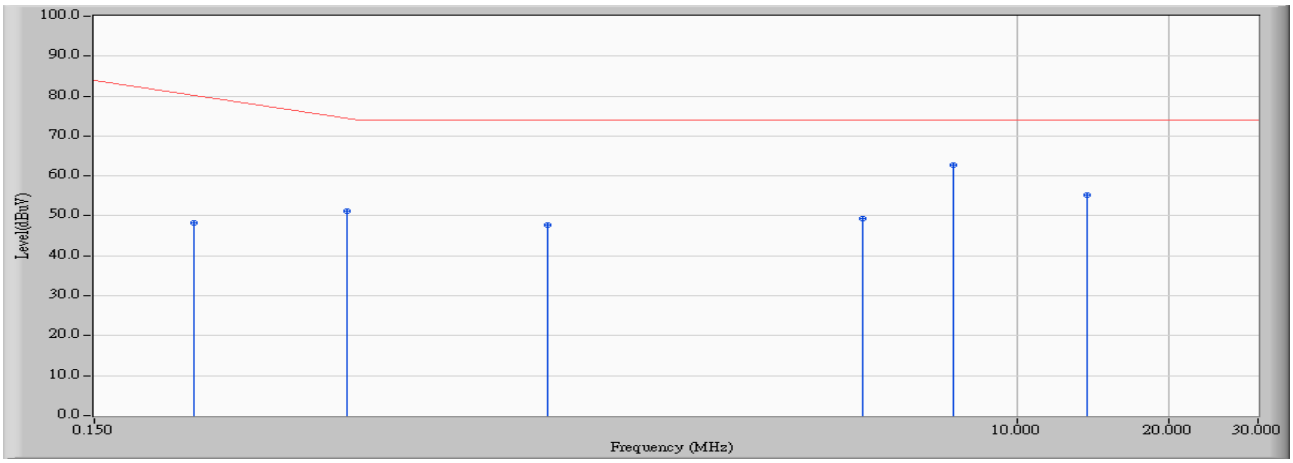
Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR-1	**Time : 2008/05/19 - 11:40**
Limit : ISN_Voltage_B_00M_QP	**Margin : 10**
EUT : Personal Computer	**Probe : ISN-T4 - Line1**
Power : AC 230V/50Hz	**Note : MODE 3,ISN 10Mbps**



Site : SR-1	**Time : 2008/05/19 - 11:41**
Limit : ISN_Voltage_B_00M_QP	**Margin : 0**
EUT : Personal Computer	**Probe : ISN-T4 - Line1**
Power : AC 230V/50Hz	**Note : MODE 3,ISN 10Mbps**

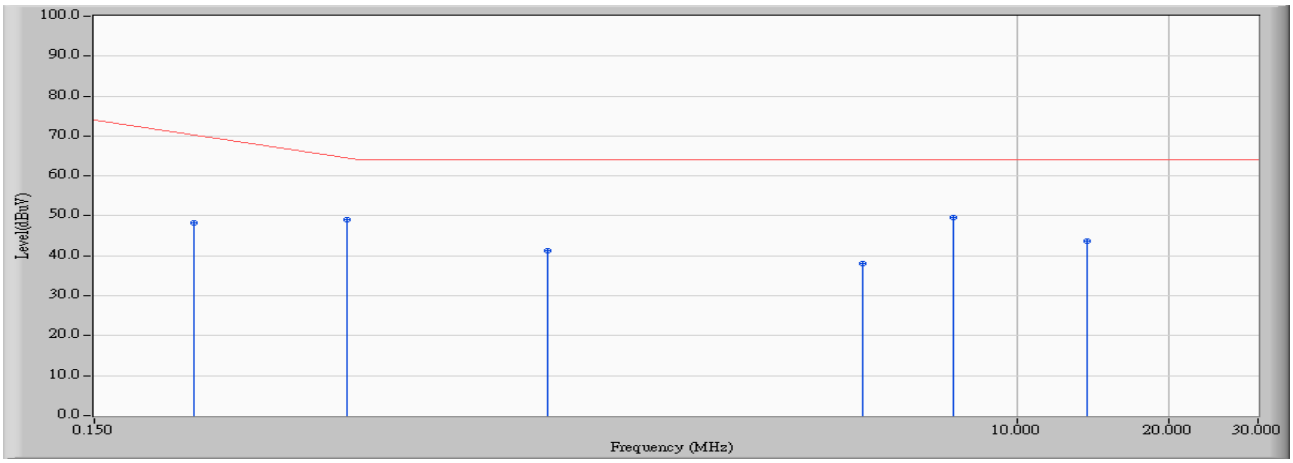


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.236	9.941	38.440	48.381	-33.162	81.543	QUASIPEAK
2		0.474	9.901	41.290	51.191	-23.552	74.743	QUASIPEAK
3		1.185	9.900	37.860	47.760	-26.240	74.000	QUASIPEAK
4		4.943	9.880	39.340	49.220	-24.780	74.000	QUASIPEAK
5	*	7.502	9.860	52.960	62.820	-11.180	74.000	QUASIPEAK
6		13.752	10.020	45.100	55.120	-18.880	74.000	QUASIPEAK

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SR-1	**Time : 2008/05/19 - 11:41**
Limit : ISN_Voltage_B_00M_AV	**Margin : 0**
EUT : Personal Computer	**Probe : ISN-T4 - Line1**
Power : AC 230V/50Hz	**Note : MODE 3,ISN 10Mbps**



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV)	Margin (dB)	Limit (dBuV)	Detector Type
1		0.236	9.941	38.430	48.371	-23.172	71.543	AVERAGE
2		0.474	9.901	39.220	49.121	-15.622	64.743	AVERAGE
3		1.185	9.900	31.300	41.200	-22.800	64.000	AVERAGE
4		4.943	9.880	28.290	38.170	-25.830	64.000	AVERAGE
5	*	7.502	9.860	39.850	49.710	-14.290	64.000	AVERAGE
6		13.752	10.020	33.630	43.650	-20.350	64.000	AVERAGE

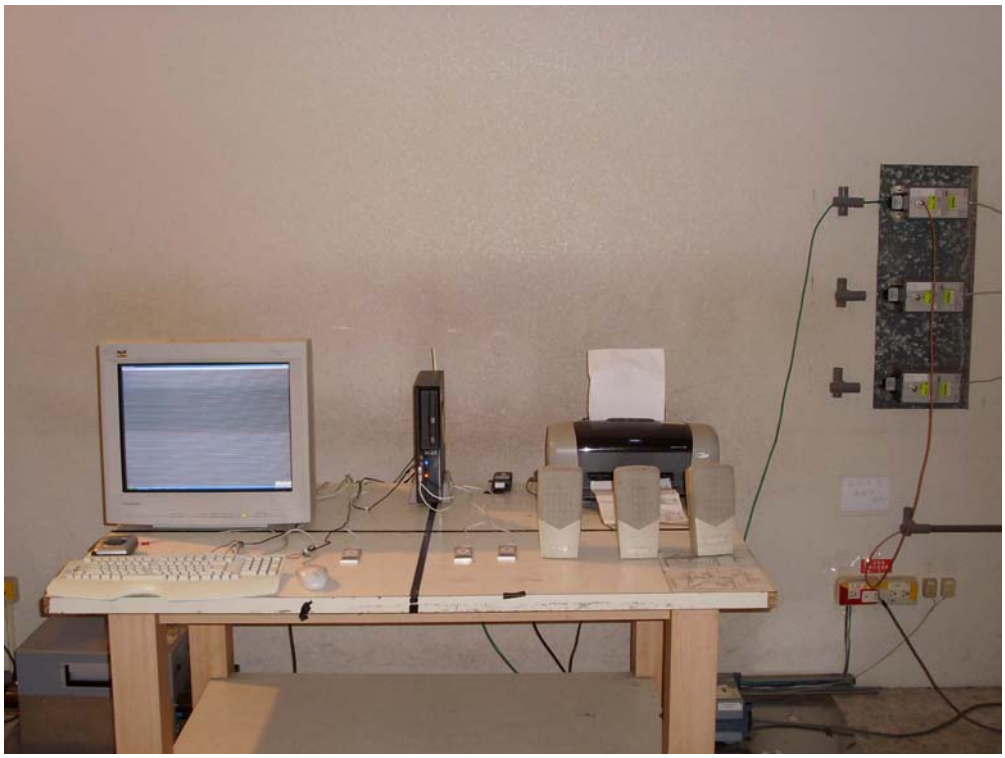
Note:

1. All Reading Levels are Quasi-Peak and average value.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

4.7. Test Photograph

Test Mode : Mode 1: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (LI SHIN)

Description : Front View of ISN Test-VOL

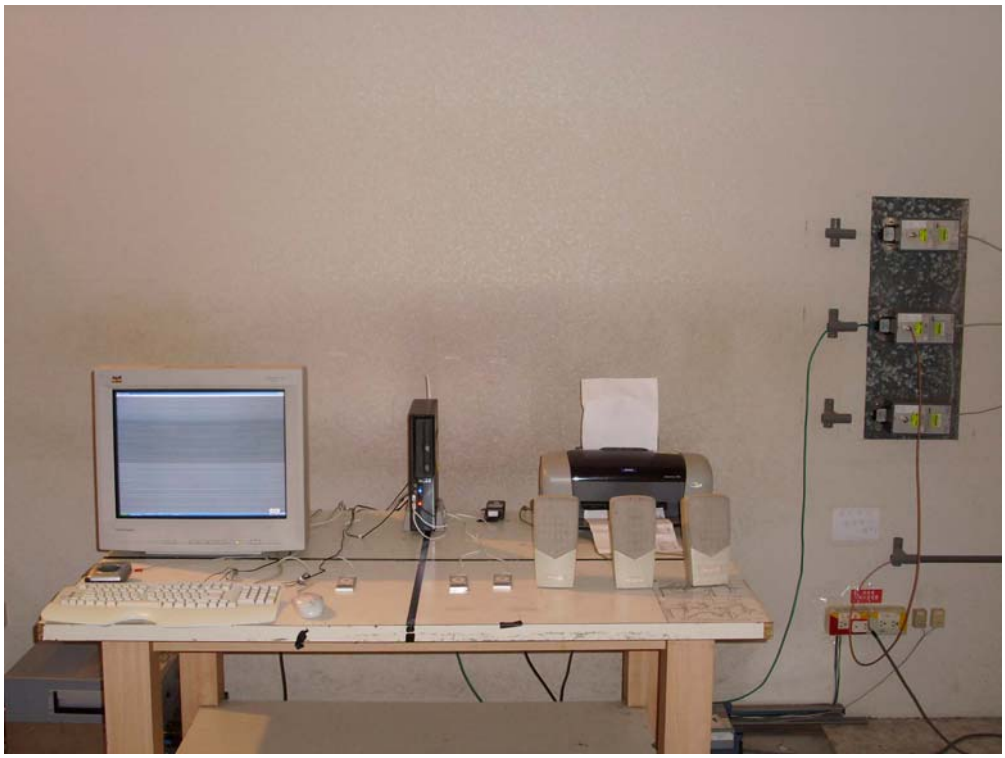


Test Mode : Mode 1: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (LI SHIN)

Description : Back View of ISN Test-VOL

Test Mode : Mode 1: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (LI SHIN)

Description : Front View of ISN Test



Test Mode : Mode 1: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (LI SHIN)

Description : Back View of ISN Test

Test Mode : Mode 2: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (DELTA)

Description : Front View of ISN Test-VOL

Test Mode : Mode 2: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (DELTA)

Description : Back View of ISN Test-VOL

Test Mode : Mode 2: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (DELTA)

Description : Front View of ISN Test

Test Mode : Mode 2: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (DELTA)

Description : Back View of ISN Test

Test Mode : Mode 3: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (BesTec)

Description : Front View of ISN Test-VOL

Test Mode : Mode 3: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (BesTec)

Description : Back View of ISN Test-VOL

Test Mode : Mode 2: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (DELTA)

Description : Front View of ISN Test

Test Mode : Mode 2: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (DELTA)

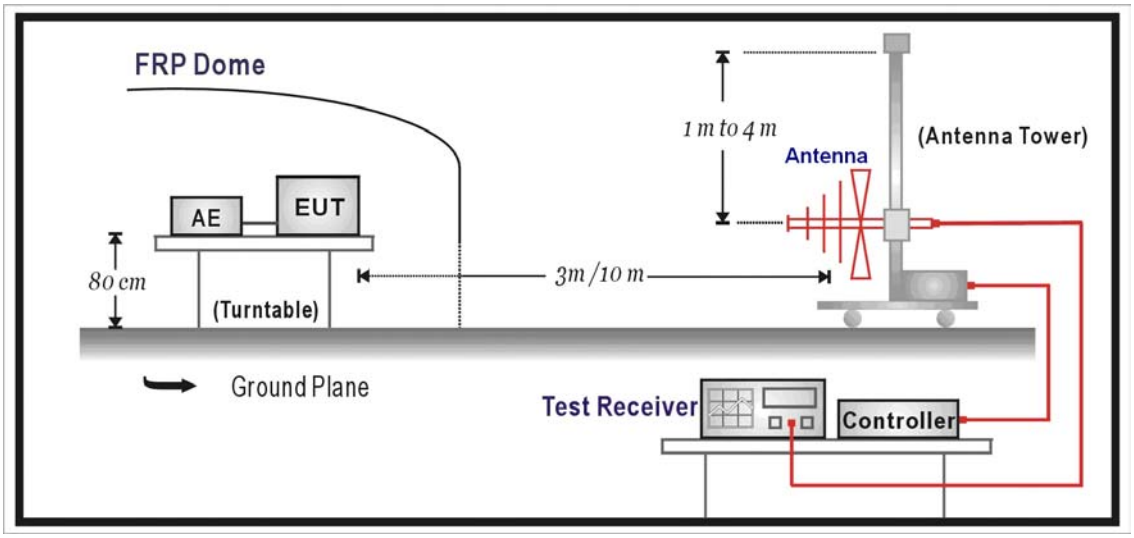
Description : Back View of ISN Test

5. Radiated Emission

5.1. Test Specification

According to EMC Standard : EN 55022

5.2. Test Setup



5.3. Limit

Limits		
Frequency (MHz)	Distance (m)	dBuV/m
30 – 230	10	30
230 – 1000	10	37

Remark:

1. The tighter limit shall apply at the edge between two frequency bands.
2. Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

5.4. Test Procedure

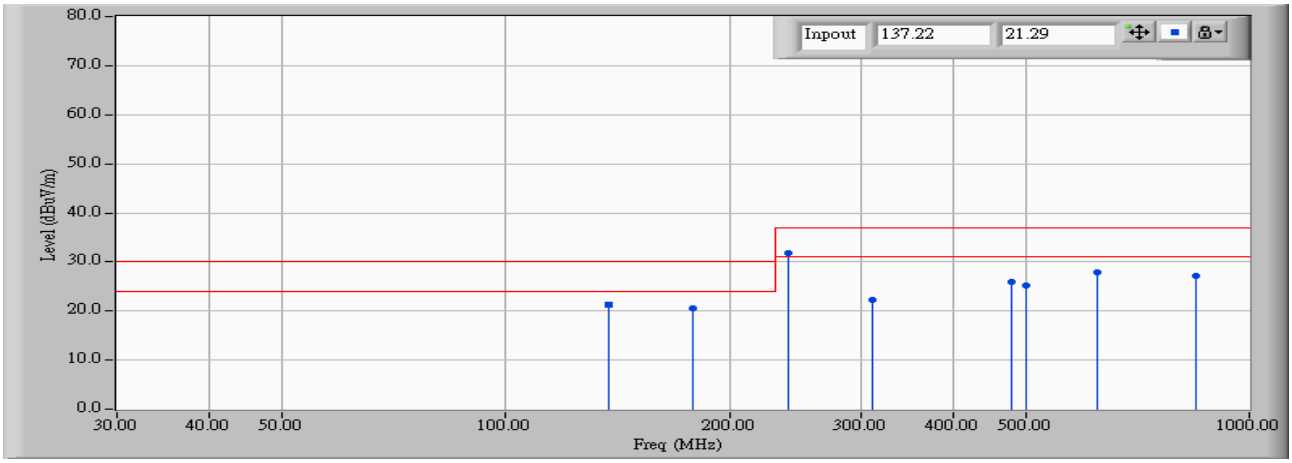
The EUT and its simulators are placed on a turn table which is 0.8 meter above ground. The turn table can rotate 360 degrees to determine the position of the maximum emission level.
The EUT was positioned such that the distance from antenna to the EUT was 10 meters.
The antenna can move up and down between 1 meter and 4 meters to find out the maximum emission level.
Both horizontal and vertical polarization of the antenna are set on measurement. In order to find the maximum emission, all of the interface cables must be manipulated on radiated measurement.
Radiated emissions were invested over the frequency range from 30MHz to1GHz using a receiver bandwidth of 120kHz. Radiated was performed at an antenna to EUT distance of 10 meters.

5.5. Deviation from Test Standard

No deviation.

5.6. Test Result

Site : SITE-1	**Time : 2008/04/25 - 14:15**
Limit : CISPR_B_10M_QP	**Margin : 6**
EUT : Personal Computer	**Probe : 2007_Site1(2921)_10M - HORIZONTAL**
Power : AC 230V/50Hz	**Note : MODE 1**

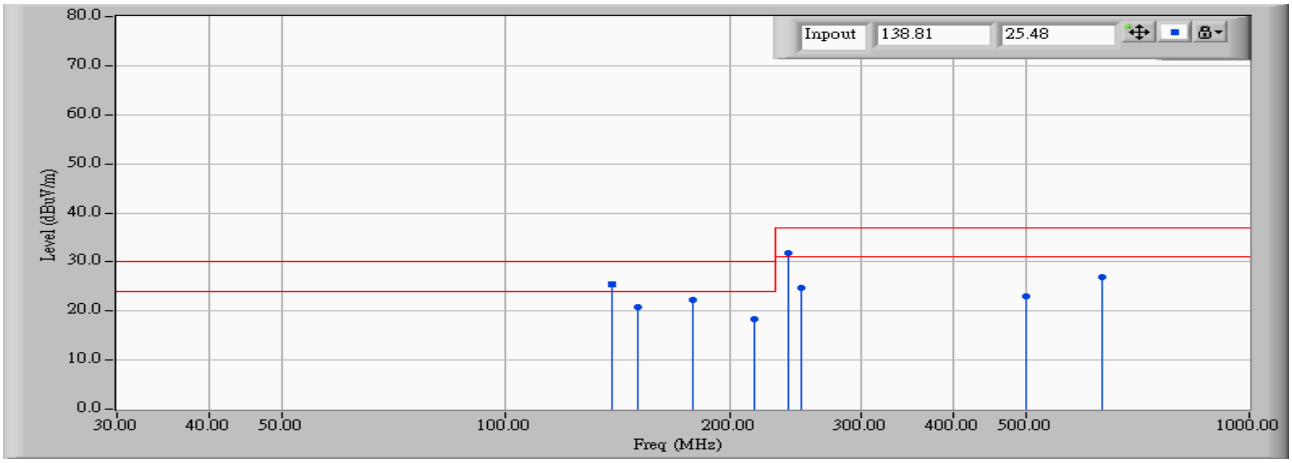


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		137.220	12.995	8.300	21.295	-8.705	30.000	QUASIPEAK
2		178.160	10.747	9.900	20.647	-9.353	30.000	QUASIPEAK
3	*	240.000	13.304	18.600	31.904	-5.096	37.000	QUASIPEAK
4		310.900	16.125	6.200	22.325	-14.675	37.000	QUASIPEAK
5		480.000	20.693	5.200	25.893	-11.107	37.000	QUASIPEAK
6		500.000	20.812	4.400	25.212	-11.788	37.000	QUASIPEAK
7		623.970	22.780	5.200	27.980	-9.020	37.000	QUASIPEAK
8		847.320	25.178	2.100	27.278	-9.722	37.000	QUASIPEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SITE-1	**Time : 2008/04/25 - 14:34**
Limit : CISPR_B_10M_QP	**Margin : 6**
EUT : Personal Computer	**Probe : 2007_Site1(2921)_10M - VERTICAL**
Power : AC 230V/50Hz	**Note : MODE 1**

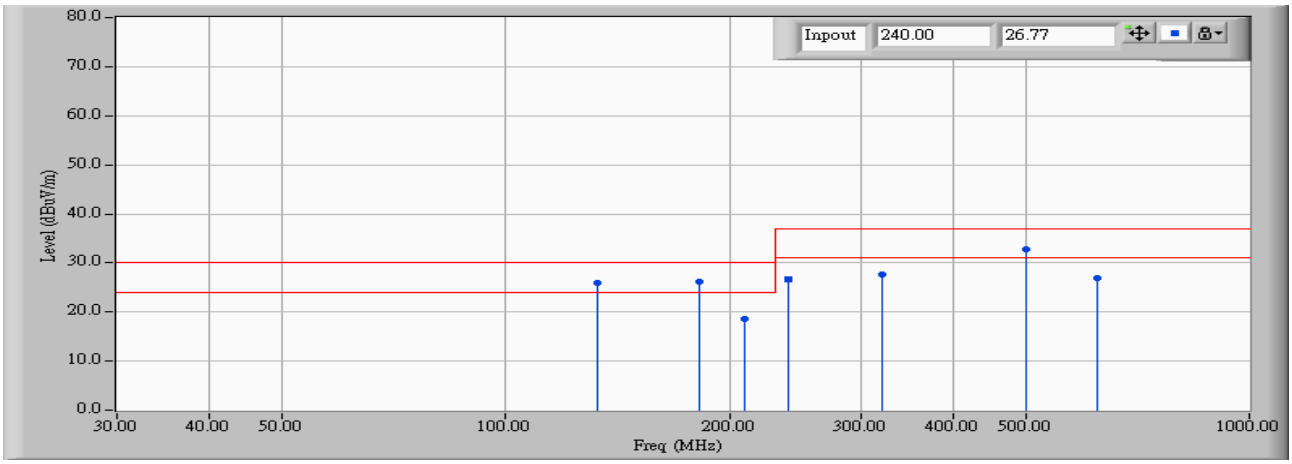


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1	*	138.810	12.885	12.600	25.485	-4.515	30.000	QUASIPEAK
2		150.870	11.940	8.800	20.740	-9.260	30.000	QUASIPEAK
3		178.160	10.747	11.600	22.347	-7.653	30.000	QUASIPEAK
4		216.000	10.560	7.700	18.260	-11.740	30.000	QUASIPEAK
5		240.000	13.304	18.500	31.804	-5.196	37.000	QUASIPEAK
6		250.000	14.388	10.200	24.588	-12.412	37.000	QUASIPEAK
7		500.000	20.812	2.100	22.912	-14.088	37.000	QUASIPEAK
8		633.940	23.011	4.000	27.011	-9.989	37.000	QUASIPEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SITE-1	**Time : 2008/04/29 - 05:26**
Limit : CISPR_B_10M_QP	**Margin : 6**
EUT : Personal Computer	**Probe : 2007_Site1(2921)_10M - HORIZONTAL**
Power : AC 230V/50Hz	**Note : MODE 2**

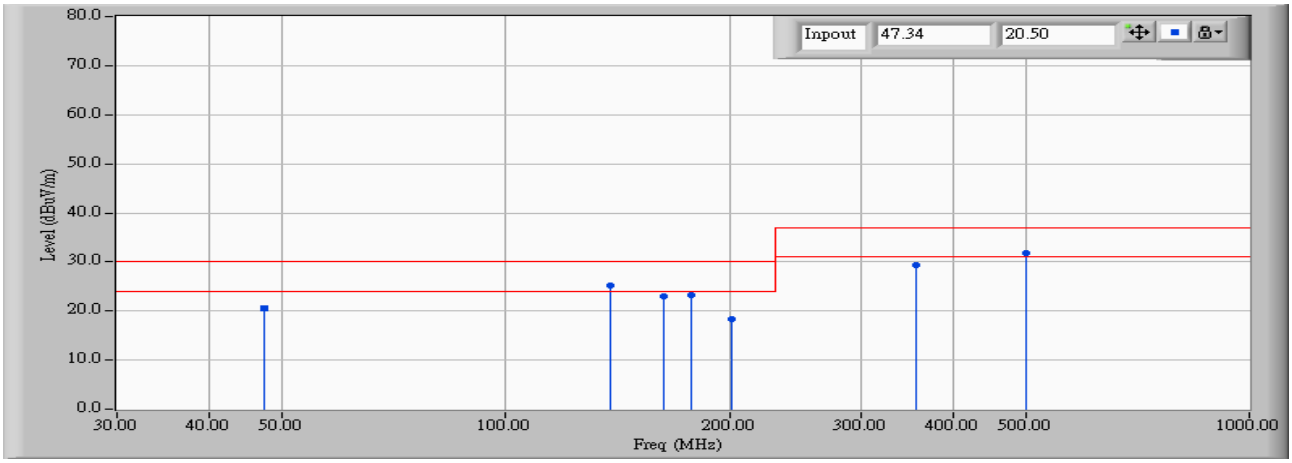


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		133.000	13.822	12.000	25.822	-4.178	30.000	QUASIPEAK
2	*	181.800	11.094	15.200	26.294	-3.706	30.000	QUASIPEAK
3		210.000	11.567	7.000	18.567	-11.433	30.000	QUASIPEAK
4		240.000	14.124	12.650	26.774	-10.226	37.000	QUASIPEAK
5		320.000	17.560	10.200	27.760	-9.240	37.000	QUASIPEAK
6		500.000	22.412	10.250	32.662	-4.338	37.000	QUASIPEAK
7		625.400	24.708	2.300	27.008	-9.992	37.000	QUASIPEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SITE-1	**Time : 2008/04/29 - 04:56**
Limit : CISPR_B_10M_QP	**Margin : 6**
EUT : Personal Computer	**Probe : 2007_Site1(2921)_10M - VERTICAL**
Power : AC 230V/50Hz	**Note : MODE 2**

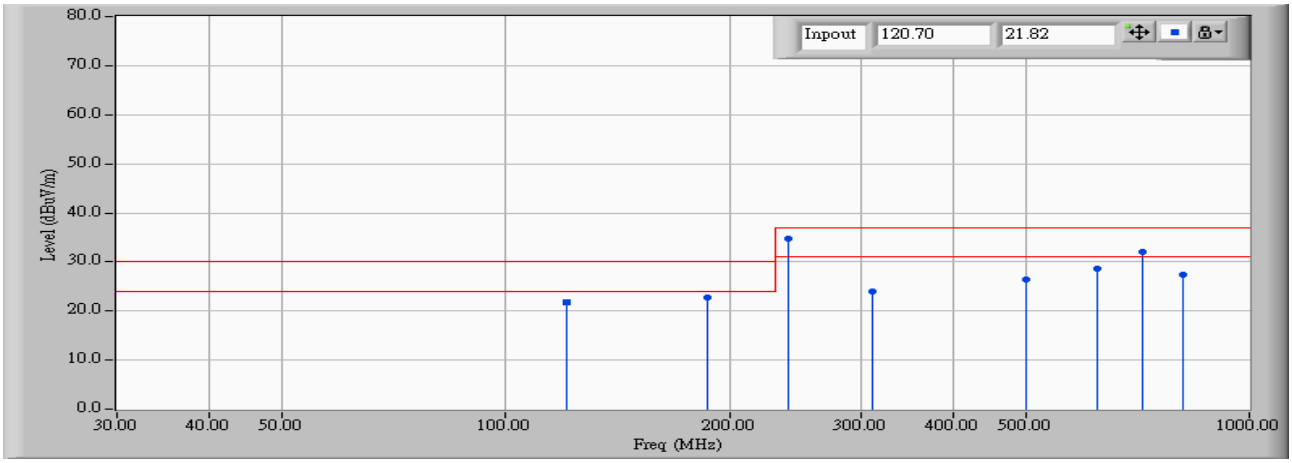


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		47.340	10.298	10.200	20.498	-9.502	30.000	QUASIPEAK
2		138.000	13.526	12.300	25.826	-4.174	30.000	QUASIPEAK
3		162.880	12.165	11.500	23.665	-6.335	30.000	QUASIPEAK
4		177.800	11.266	12.400	23.666	-6.334	30.000	QUASIPEAK
5		201.750	11.625	7.500	19.124	-10.876	30.000	QUASIPEAK
6		356.100	18.779	11.600	30.379	-6.621	37.000	QUASIPEAK
7	*	500.000	22.412	11.020	33.432	-3.568	37.000	QUASIPEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SITE-1	**Time : 2008/04/25 - 15:17**
Limit : CISPR_B_10M_QP	**Margin : 6**
EUT : Personal Computer	**Probe : 2007_Site1(2921)_10M - HORIZONTAL**
Power : AC 230V/50Hz	**Note : MODE 3**

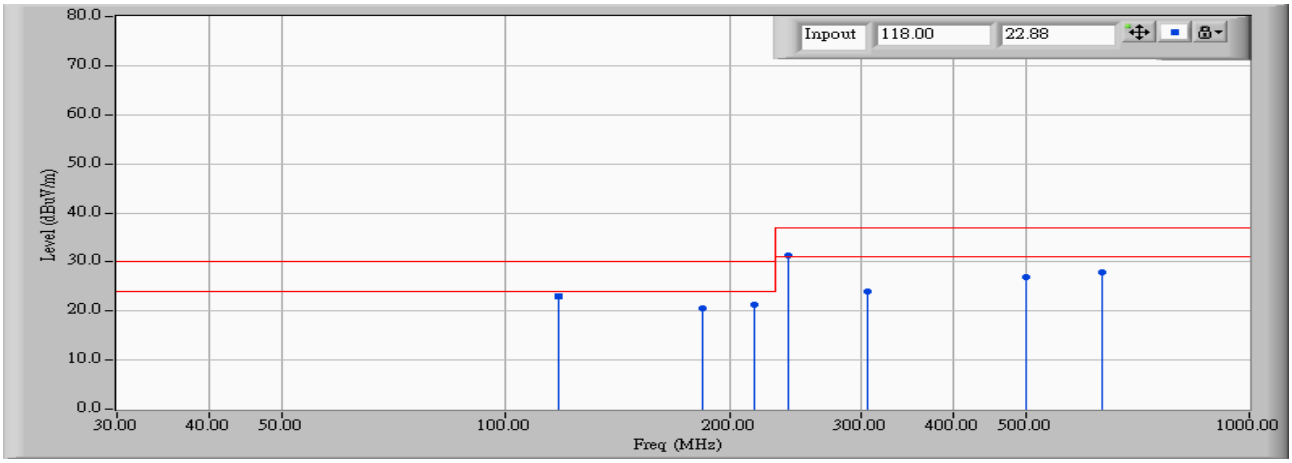


		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		120.700	13.423	8.400	21.823	-8.177	30.000	QUASIPEAK
2		186.470	10.569	12.100	22.669	-7.331	30.000	QUASIPEAK
3	*	240.000	13.304	21.500	34.804	-2.196	37.000	QUASIPEAK
4		310.600	16.116	7.800	23.916	-13.084	37.000	QUASIPEAK
5		500.000	20.812	5.500	26.312	-10.688	37.000	QUASIPEAK
6		623.970	22.780	5.800	28.580	-8.420	37.000	QUASIPEAK
7		719.970	24.100	8.000	32.100	-4.900	37.000	QUASIPEAK
8		815.960	24.998	2.300	27.298	-9.702	37.000	QUASIPEAK

Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Site : SITE-1	**Time : 2008/04/25 - 14:59**
Limit : CISPR_B_10M_QP	**Margin : 6**
EUT : Personal Computer	**Probe : 2007_Site1(2921)_10M - VERTICAL**
Power : AC 230V/50Hz	**Note : MODE 3**



		Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Measure Level (dBuV/m)	Margin (dB)	Limit (dBuV/m)	Detector Type
1		118.000	13.278	9.600	22.878	-7.122	30.000	QUASIPEAK
2		183.870	10.560	10.100	20.660	-9.340	30.000	QUASIPEAK
3		216.000	10.560	10.700	21.260	-8.740	30.000	QUASIPEAK
4	*	240.000	13.304	17.900	31.204	-5.796	37.000	QUASIPEAK
5		307.190	15.986	7.900	23.886	-13.114	37.000	QUASIPEAK
6		500.000	20.812	6.200	27.012	-9.988	37.000	QUASIPEAK
7		633.940	23.011	4.800	27.811	-9.189	37.000	QUASIPEAK

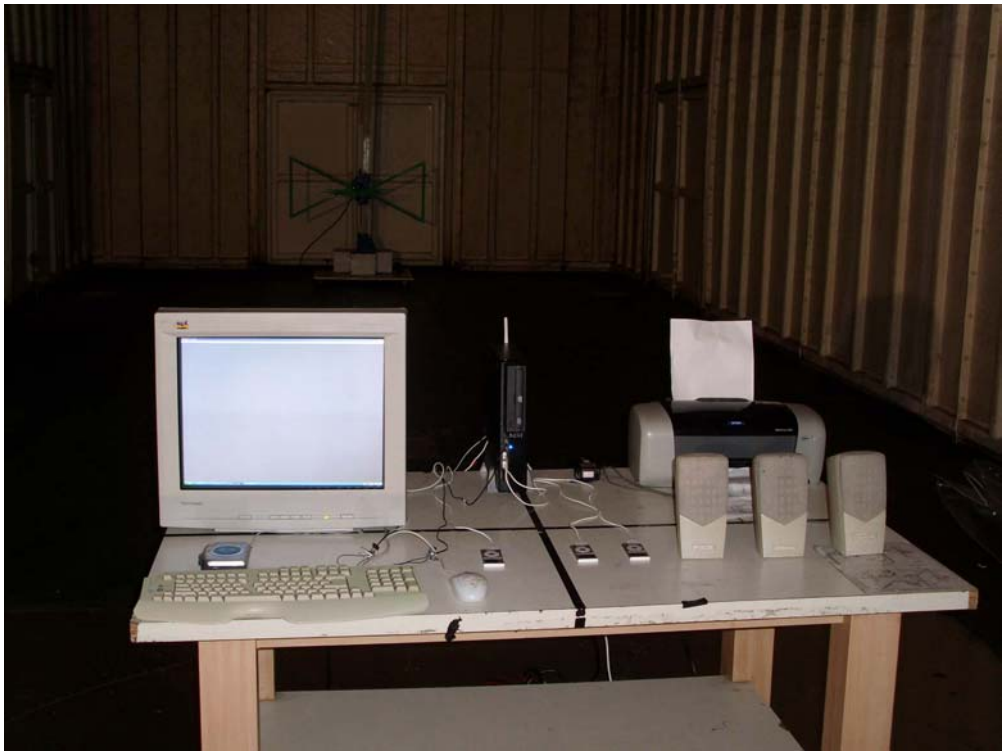
Note:

1. All Readings below 1GHz are Quasi-Peak, above are performed with peak and/or average measurements as necessary.
2. " * ", means this data is the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

5.7. Test Photograph

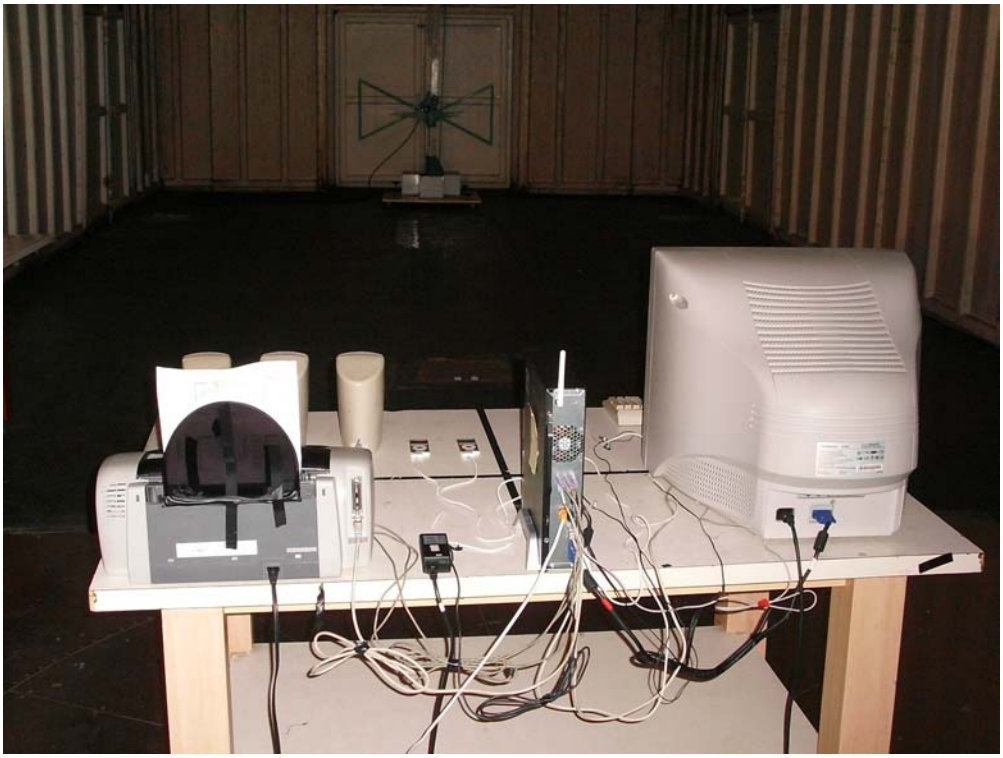
Test Mode : Mode 1: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (LI SHIN)

Description : Front View of Radiated Test



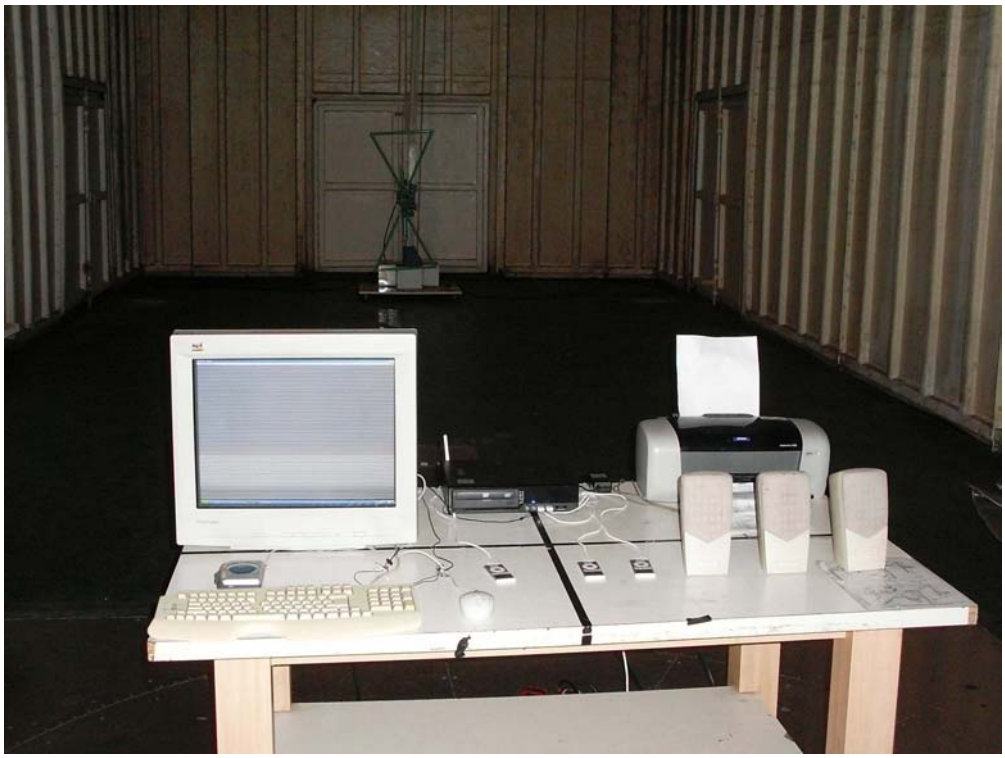
Test Mode : Mode 1: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (LI SHIN)

Description : Back View of Radiated Test



Test Mode : Mode 2: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (DELTA)

Description : Front View of Radiated Test

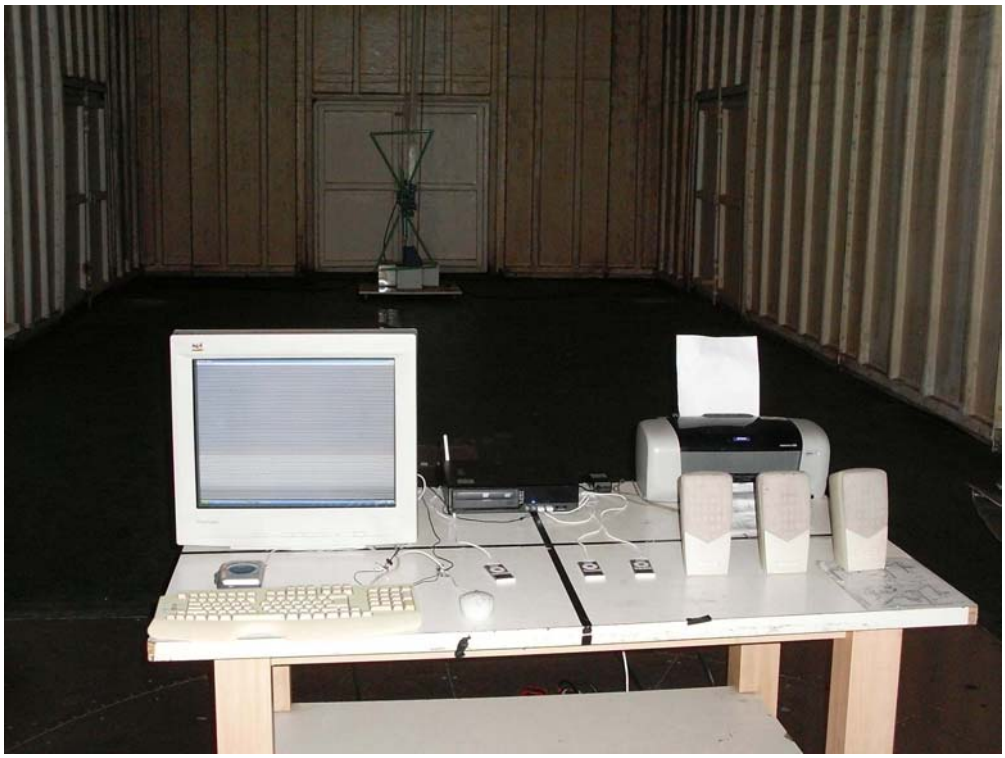


Test Mode : Mode 2: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (DELTA)

Description : Back View of Radiated Test

Test Mode : Mode 3: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (BesTec)

Description : Front View of Radiated Test



Test Mode : Mode 3: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (BesTec)

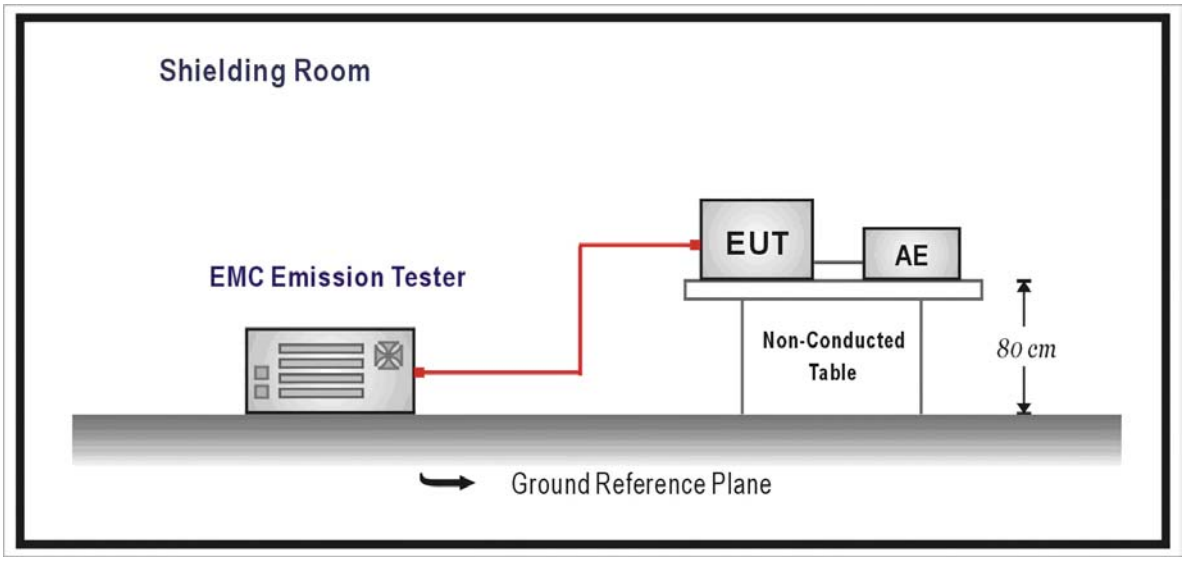
Description : Back View of Radiated Test

6. Harmonic Current Emission

6.1. Test Specification

According to EMC Standard : EN 61000-3-2

6.2. Test Setup



6.3. Limit

(a) Limits of Class A Harmonics Currents

Harmonics Order n	Maximum Permissible harmonic current A	Harmonics Order n	Maximum Permissible harmonic current A
Odd harmonics		Even harmonics	
3	2.30	2	1.08
5	1.14	4	0.43
7	0.77	6	0.30
9	0.40	8 ≤ n ≤ 40	0.23 * 8/n
11	0.33		
13	0.21		
15 ≤ n ≤ 39	0.15 * 15/n		

(b) Limits of Class B Harmonics Currents

For Class B equipment, the harmonic of the input current shall not exceed the maximum permissible values given in table that is the limit of Class A multiplied by a factor of 1.5.

(c) Limits of Class C Harmonics Currents

Harmonics Order n	Maximum Permissible harmonic current Expressed as a percentage of the input current at the fundamental frequency %
2	2
3	30 · λ*
5	10
7	7
9	5
11 ≤ n ≤ 39 (odd harmonics only)	3
∗λ is the circuit power factor	

(d) Limits of Class D Harmonics Currents

Harmonics Order n	Maximum Permissible harmonic current per watt mA/W	Maximum Permissible harmonic current A
3	3.4	2.30
5	1.9	1.14
7	1.0	0.77
9	0.5	0.40
11	0.35	0.33
11 ≤ n ≤ 39 (odd harmonics only)	3.85/n	See limit of Class A

6.4. Test Procedure

The EUT is supplied in series with power analyzer from a power source having the same normal voltage and frequency as the rated supply voltage and the equipment under test. And the rated voltage at the supply voltage of EUT of 0.94 times and 1.06 times shall be performed.

6.5. Deviation from Test Standard

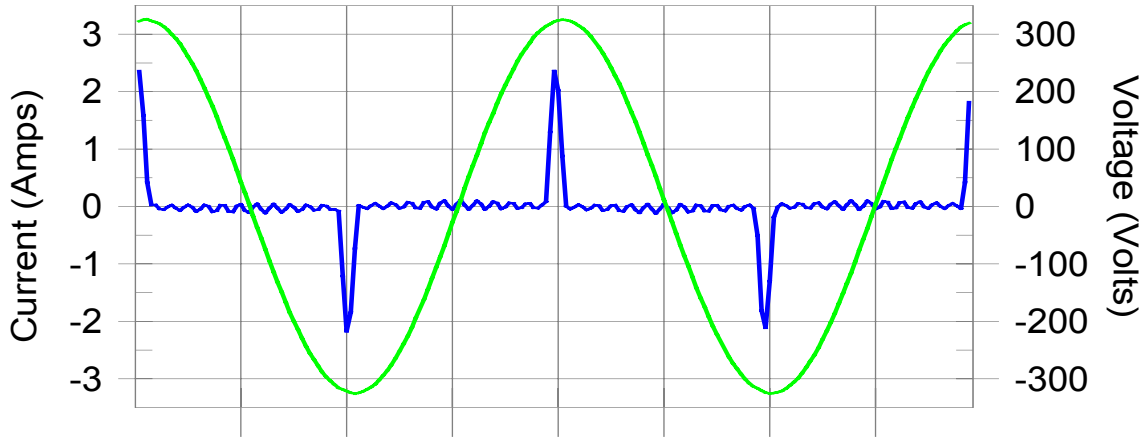
No deviation.

6.6. Test Result

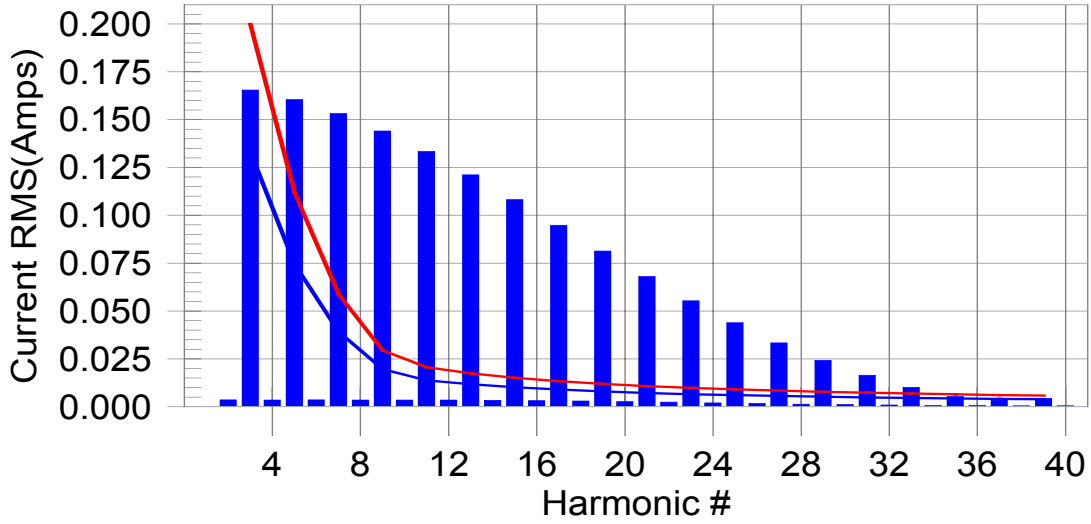
Product	Personal Computer		
Test Item	Power Harmonics		
Test Mode	Mode 1: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (LI SHIN)		
Date of Test	2008/05/02	Test Site	No.3 Shielded Room

Test Result: Pass Source qualification: Normal

Current & voltage waveforms



Harmonics and Class D limit line European Limits



Test result: Pass Worst harmonic was #0 with 0.00% of the limit.

Test Result: Pass Source qualification: Normal

THC(A): 0.00 I-THD(%): 0.00 POHC(A): 0.000 POHC Limit(A): 0.000

Highest parameter values during test:

V_RMS (Volts):	229.74	Frequency(Hz):	50.00
I_Peak (Amps):	2.417	I_RMS (Amps):	0.457
I_Fund (Amps):	0.171	Crest Factor:	5.364
Power (Watts):	39.2	Power Factor:	0.374

Harm#	Harms(avg)	100%Limit	%of Limit	Harms(max)	150%Limit	%of Limit	Status
2	0.004						
3	0.161	0.133	0.0	0.165	0.200	0.00	Pass
4	0.004						
5	0.156	0.075	0.0	0.160	0.112	0.00	Pass
6	0.004						
7	0.149	0.039	0.0	0.153	0.059	0.00	Pass
8	0.003						
9	0.141	0.020	0.0	0.144	0.029	0.00	Pass
10	0.003						
11	0.130	0.014	0.0	0.133	0.021	0.00	Pass
12	0.004						
13	0.118	0.012	0.0	0.121	0.017	0.00	Pass
14	0.003						
15	0.106	0.010	0.0	0.108	0.015	0.00	Pass
16	0.003						
17	0.093	0.009	0.0	0.095	0.013	0.00	Pass
18	0.003						
19	0.080	0.008	0.0	0.081	0.012	0.00	Pass
20	0.003						
21	0.067	0.007	0.0	0.068	0.011	0.00	Pass
22	0.002						
23	0.055	0.007	0.0	0.055	0.010	0.00	Pass
24	0.002						
25	0.043	0.006	0.0	0.044	0.009	0.00	Pass
26	0.002						
27	0.033	0.006	0.0	0.033	0.008	0.00	Pass
28	0.001						
29	0.024	0.005	0.0	0.024	0.008	0.00	Pass
30	0.001						
31	0.016	0.005	0.0	0.016	0.007	0.00	Pass
32	0.001						
33	0.010	0.005	0.0	0.010	0.007	0.00	Pass
34	0.001						
35	0.005	0.004	0.0	0.005	0.006	0.00	Pass
36	0.001						
37	0.003	0.004	0.0	0.003	0.006	0.00	Pass
38	0.001						
39	0.004	0.004	0.0	0.004	0.006	0.00	Pass
40	0.000						

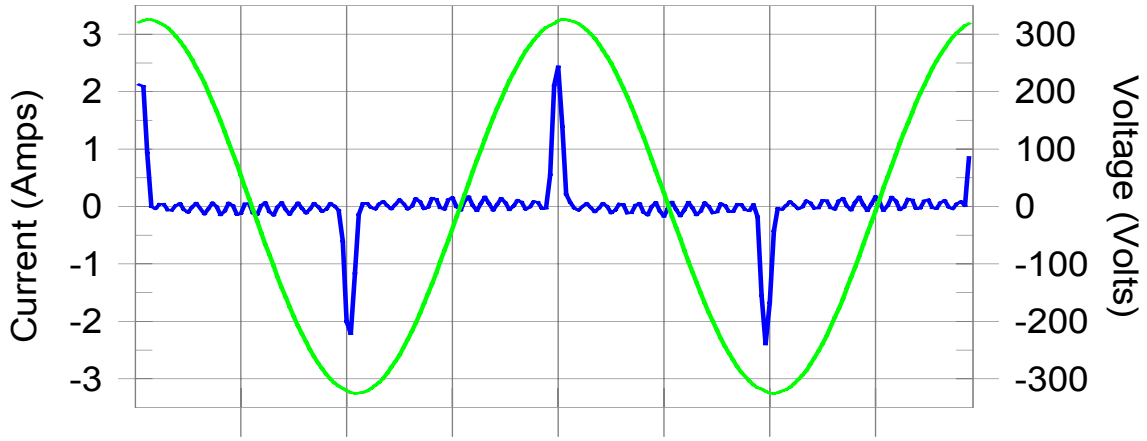
1.Dynamic limits were applied for this test. The highest harmonics values in the above table may not occur at the same window as the maximum harmonics/limit ratio.

2:According to EN61000-3-2 paragraph 7 the note 1 and 2 are valid for all applications having an active input power >75W. Others the result should be pass.

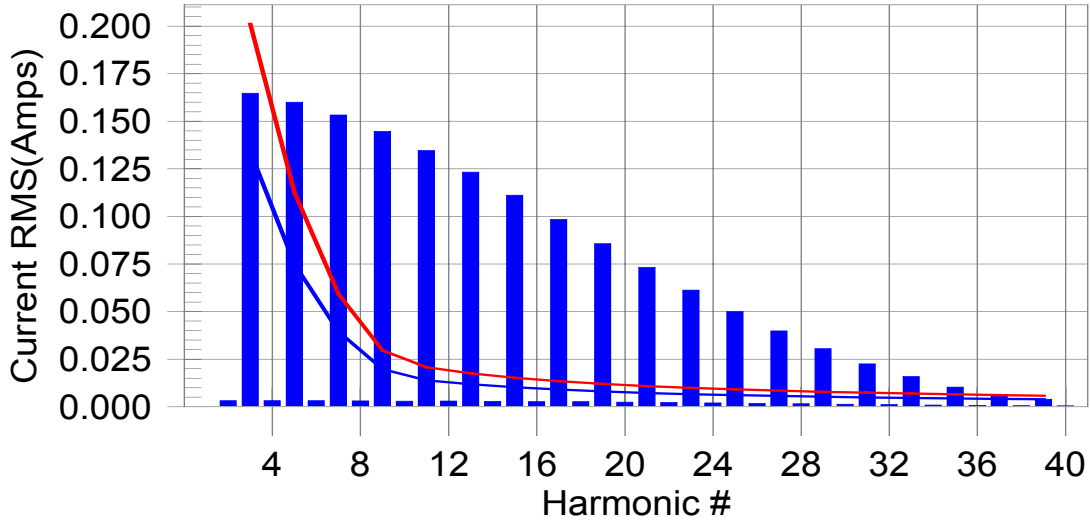
Product	Personal Computer		
Test Item	Power Harmonics		
Test Mode	Mode 2: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (DELTA)		
Date of Test	2008/05/02	Test Site	No.3 Shielded Room

Test Result: Pass Source qualification: Normal

Current & voltage waveforms



Harmonics and Class D limit line European Limits



Test result: Pass Worst harmonic was #0 with 0.00% of the limit.

Test Result: Pass Source qualification: Normal

THC(A): 0.00 I-THD(%): 0.00 POHC(A): 0.000 POHC Limit(A): 0.000

Highest parameter values during test:

V_RMS (Volts):	229.73	Frequency(Hz):	50.00
I_Peak (Amps):	2.551	I_RMS (Amps):	0.473
I_Fund (Amps):	0.173	Crest Factor:	5.569
Power (Watts):	39.5	Power Factor:	0.364

Harm#	Harms(avg)	100%Limit	%of Limit	Harms(max)	150%Limit	%of Limit	Status
2	0.003						
3	0.161	0.134	0.0	0.165	0.201	0.00	Pass
4	0.003						
5	0.157	0.075	0.0	0.160	0.112	0.00	Pass
6	0.003						
7	0.150	0.039	0.0	0.153	0.059	0.00	Pass
8	0.003						
9	0.142	0.020	0.0	0.145	0.030	0.00	Pass
10	0.003						
11	0.132	0.014	0.0	0.135	0.021	0.00	Pass
12	0.003						
13	0.121	0.012	0.0	0.123	0.018	0.00	Pass
14	0.003						
15	0.109	0.010	0.0	0.111	0.015	0.00	Pass
16	0.003						
17	0.097	0.009	0.0	0.098	0.013	0.00	Pass
18	0.003						
19	0.084	0.008	0.0	0.086	0.012	0.00	Pass
20	0.002						
21	0.072	0.007	0.0	0.073	0.011	0.00	Pass
22	0.002						
23	0.060	0.007	0.0	0.061	0.010	0.00	Pass
24	0.002						
25	0.049	0.006	0.0	0.050	0.009	0.00	Pass
26	0.002						
27	0.039	0.006	0.0	0.040	0.008	0.00	Pass
28	0.002						
29	0.030	0.005	0.0	0.031	0.008	0.00	Pass
30	0.001						
31	0.022	0.005	0.0	0.023	0.007	0.00	Pass
32	0.001						
33	0.015	0.005	0.0	0.016	0.007	0.00	Pass
34	0.001						
35	0.010	0.004	0.0	0.010	0.007	0.00	Pass
36	0.001						
37	0.006	0.004	0.0	0.006	0.006	0.00	Pass
38	0.001						
39	0.004	0.004	0.0	0.004	0.006	0.00	Pass
40	0.000						

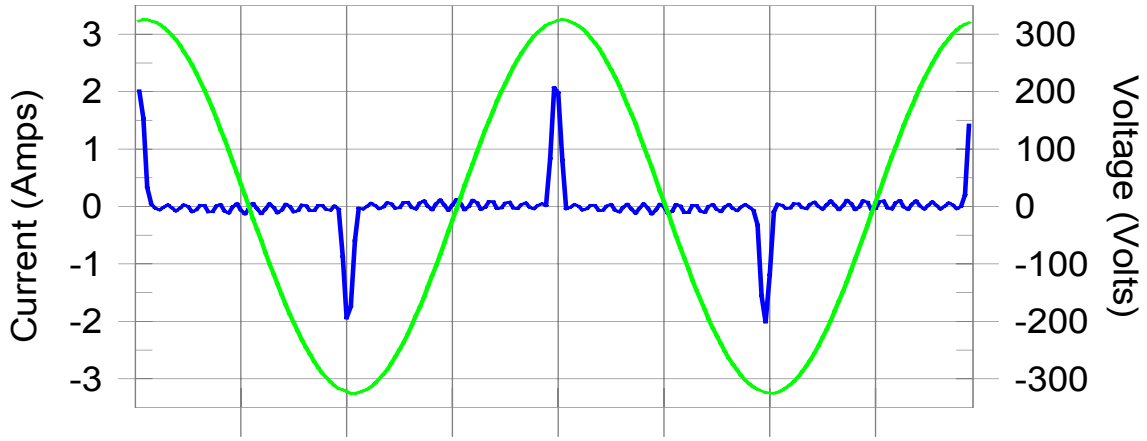
1.Dynamic limits were applied for this test. The highest harmonics values in the above table may not occur at the same window as the maximum harmonics/limit ratio.

2:According to EN61000-3-2 paragraph 7 the note 1 and 2 are valid for all applications having an active input power >75W. Others the result should be pass.

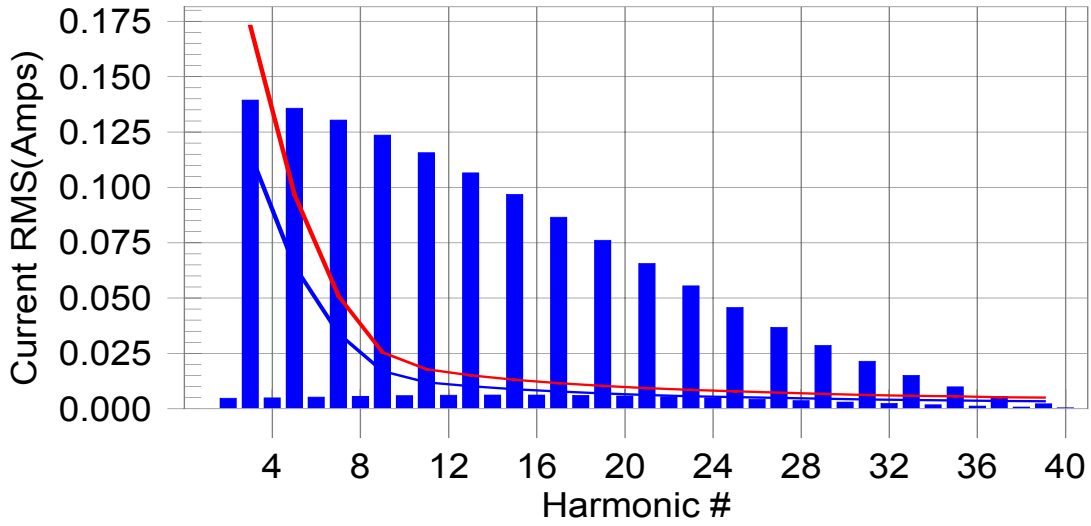
Product	Personal Computer		
Test Item	Power Harmonics		
Test Mode	Mode 3: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (BesTec)		
Date of Test	2008/05/20	Test Site	No.3 Shielded Room

Test Result: Pass Source qualification: Normal

Current & voltage waveforms



Harmonics and Class D limit line European Limits



Test result: Pass Worst harmonic was #0 with 0.00% of the limit.

Test Result: Pass Source qualification: Normal

THC(A): 0.00 I-THD(%): 0.00 POHC(A): 0.000 POHC Limit(A): 0.000

Highest parameter values during test:

V_RMS (Volts):	229.71	Frequency(Hz):	50.00
I_Peak (Amps):	2.249	I_RMS (Amps):	0.410
I_Fund (Amps):	0.145	Crest Factor:	5.735
Power (Watts):	33.9	Power Factor:	0.360

Harm#	Harms(avg)	100%Limit	%of Limit	Harms(max)	150%Limit	%of Limit	Status
2	0.005						
3	0.135	0.115	0.0	0.139	0.173	0.00	Pass
4	0.005						
5	0.132	0.064	0.0	0.136	0.097	0.00	Pass
6	0.005						
7	0.127	0.034	0.0	0.130	0.051	0.00	Pass
8	0.006						
9	0.120	0.017	0.0	0.124	0.025	0.00	Pass
10	0.006						
11	0.112	0.012	0.0	0.116	0.018	0.00	Pass
12	0.006						
13	0.104	0.010	0.0	0.107	0.015	0.00	Pass
14	0.006						
15	0.094	0.009	0.0	0.097	0.013	0.00	Pass
16	0.006						
17	0.084	0.008	0.0	0.087	0.012	0.00	Pass
18	0.006						
19	0.074	0.007	0.0	0.076	0.010	0.00	Pass
20	0.006						
21	0.064	0.006	0.0	0.066	0.009	0.00	Pass
22	0.005						
23	0.054	0.006	0.0	0.056	0.009	0.00	Pass
24	0.005						
25	0.045	0.005	0.0	0.046	0.008	0.00	Pass
26	0.004						
27	0.036	0.005	0.0	0.037	0.007	0.00	Pass
28	0.004						
29	0.028	0.005	0.0	0.029	0.007	0.00	Pass
30	0.003						
31	0.021	0.004	0.0	0.021	0.006	0.00	Pass
32	0.002						
33	0.015	0.004	0.0	0.015	0.006	0.00	Pass
34	0.002						
35	0.010	0.004	0.0	0.010	0.006	0.00	Pass
36	0.001						
37	0.005	0.004	0.0	0.006	0.005	0.00	Pass
38	0.001						
39	0.002	0.003	0.0	0.002	0.005	0.00	Pass
40	0.000						

1.Dynamic limits were applied for this test. The highest harmonics values in the above table may not occur at the same window as the maximum harmonics/limit ratio.

2:According to EN61000-3-2 paragraph 7 the note 1 and 2 are valid for all applications having an active input power >75W. Others the result should be pass.

6.7. Test Photograph

Test Mode : Mode 1: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (LI SHIN)

Description : Power Harmonics Test Setup

Test Mode : Mode 2: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (DELTA)

Description : Power Harmonics Test Setup

Test Mode : Mode 3: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (BesTec)

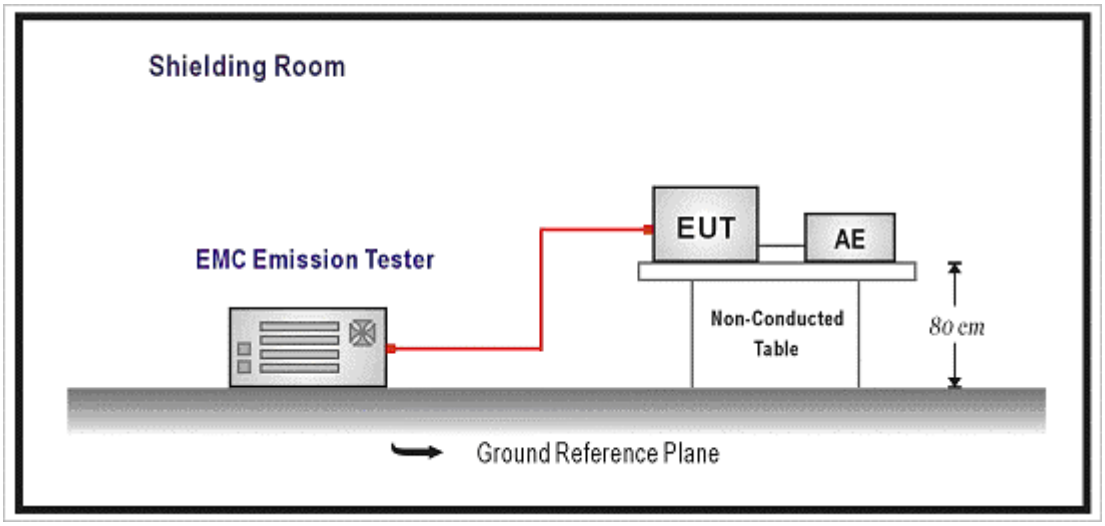
Description : Power Harmonics Test Setup

7. Voltage Fluctuation and Flicker

7.1. Test Specification

According to EMC Standard : EN 61000-3-3

7.2. Test Setup



7.3. Limit

The following limits apply:

- the value of P_{st} shall not be greater than 1.0;
- the value of P_{lt} shall not be greater than 0.65;
- the value of d(t) during a voltage change shall not exceed 3.3 % for more than 500 ms;
- the relative steady-state voltage change, d_c, shall not exceed 3.3 %;
- the maximum relative voltage change, d_{max}, shall not exceed;

a) 4 % without additional conditions;

b) 6 % for equipment which is:

- switched manually, or
- switched automatically more frequently than twice per day, and also has either a delayed restart (the delay being not less than a few tens of seconds), or manual restart, after a power supply interruption.

NOTE The cycling frequency will be further limited by the P_{st} and P_{1t} limit.

For example: a d_{max} of 6%producing a rectangular voltage change characteristic twice per hour will give a P_{1t} of about 0.65.

c) 7 % for equipment which is:
- attended whilst in use (for example: hair dryers, vacuum cleaners, kitchen equipment such as mixers, garden equipment such as lawn mowers, portable tools such as electric drills), or
- switched on automatically, or is intended to be switched on manually, no more than twice per day, and also has either a delayed restart (the delay being not less than a few tens of seconds) or manual restart, after a power supply interruption.

P_{st} and P_{1t} requirements shall not be applied to voltage changes caused by manual switching.

7.4. Test Procedure

The EUT is supplied in series with power analyzer from a power source having the same normal voltage and frequency as the rated supply voltage and the equipment under test. And the rated voltage at the supply voltage of EUT of 0.94 times and 1.06 times shall be performed.

7.5. Deviation from Test Standard

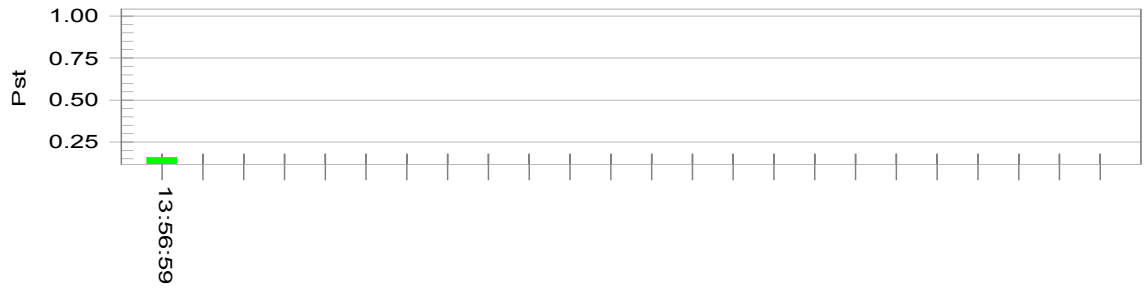
No deviation.

7.6. Test Result

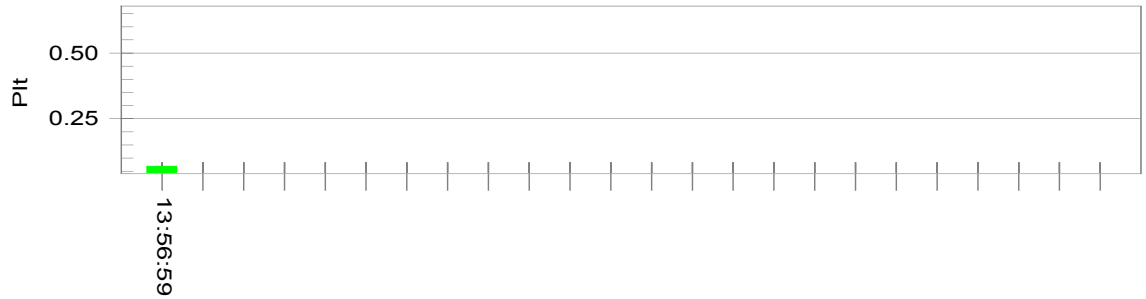
Product	Personal Computer		
Test Item	Voltage Fluctuation and Flicker		
Test Mode	Mode 1: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (LI SHIN)		
Date of Test	2008/05/02	Test Site	No.3 Shielded Room

Test Result: Pass Status: Test Completed

Pst_j and limit line European Limits



Plt and limit line



Parameter values recorded during the test:

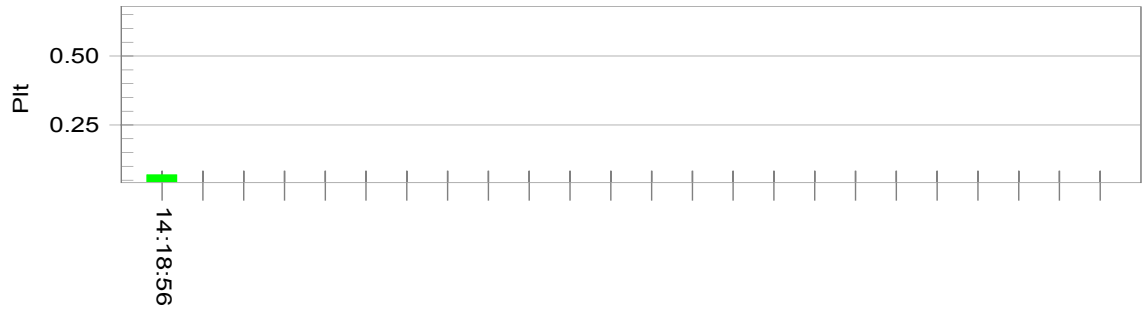
Vrms at the end of test (Volt):	229.63			
Highest dt (%):	0.00	Test limit (%):	3.30	Pass
Time(mS) > dt:	0.0	Test limit (mS):	500.0	Pass
Highest dc (%):	0.00	Test limit (%):	3.30	Pass
Highest dmax (%):	0.00	Test limit (%):	4.00	Pass
Highest Pst (10 min. period):	0.160	Test limit:	1.000	Pass
Highest Plt (2 hr. period):	0.070	Test limit:	0.650	Pass

Product	Personal Computer		
Test Item	Voltage Fluctuation and Flicker		
Test Mode	Mode 2: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (DELTA)		
Date of Test	2008/05/02	Test Site	No.3 Shielded Room

Test Result: Pass Status: Test Completed

Pst and limit line European Limits

Plt and limit line



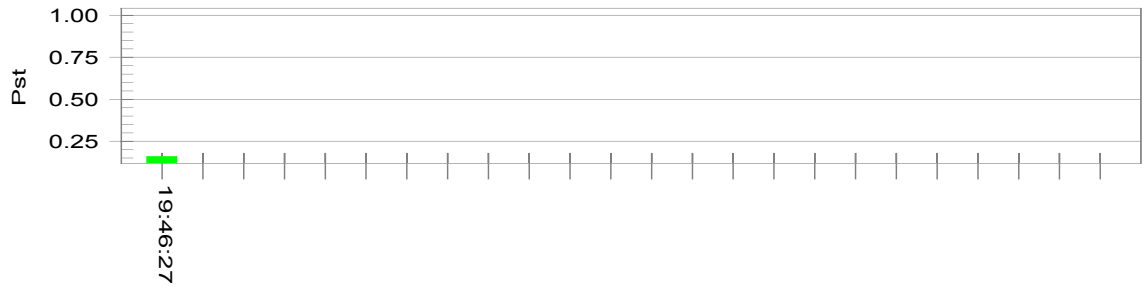
Parameter values recorded during the test:

Vrms at the end of test (Volt):	229.62			
Highest dt (%):	0.00	Test limit (%):	3.30	Pass
Time(mS) > dt:	0.0	Test limit (mS):	500.0	Pass
Highest dc (%):	0.00	Test limit (%):	3.30	Pass
Highest dmax (%):	0.00	Test limit (%):	4.00	Pass
Highest Pst (10 min. period):	0.160	Test limit:	1.000	Pass
Highest Plt (2 hr. period):	0.070	Test limit:	0.650	Pass

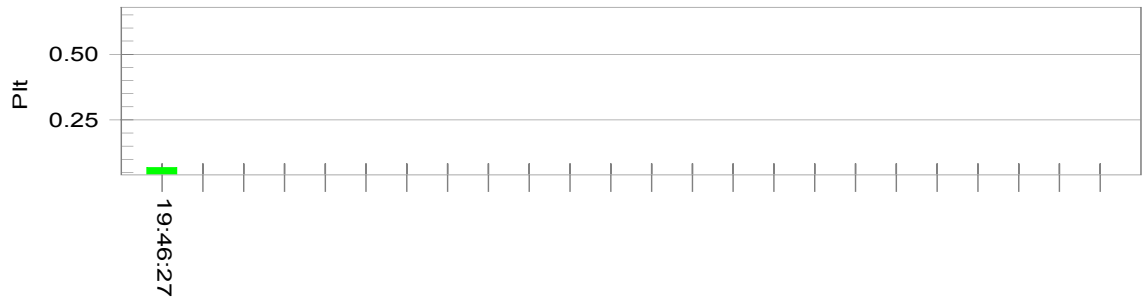
Product	Personal Computer		
Test Item	Voltage Fluctuation and Flicker		
Test Mode	Mode 3: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (BesTec)		
Date of Test	2008/05/20	Test Site	No.3 Shielded Room

Test Result: Pass Status: Test Completed

Pst_i and limit line European Limits



Plt and limit line



Parameter values recorded during the test:

Vrms at the end of test (Volt):	229.67			
Highest dt (%):	0.00	Test limit (%):	3.30	Pass
Time(mS) > dt:	0.0	Test limit (mS):	500.0	Pass
Highest dc (%):	0.00	Test limit (%):	3.30	Pass
Highest dmax (%):	0.00	Test limit (%):	4.00	Pass
Highest Pst (10 min. period):	0.160	Test limit:	1.000	Pass
Highest Plt (2 hr. period):	0.070	Test limit:	0.650	Pass

Test Photograph

Test Mode : Mode 1: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (LI SHIN)

Description : Flicker Test Setup

Test Mode : Mode 2: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (DELTA)

Description : Flicker Test Setup

Test Mode ：Mode 3: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (BesTec)

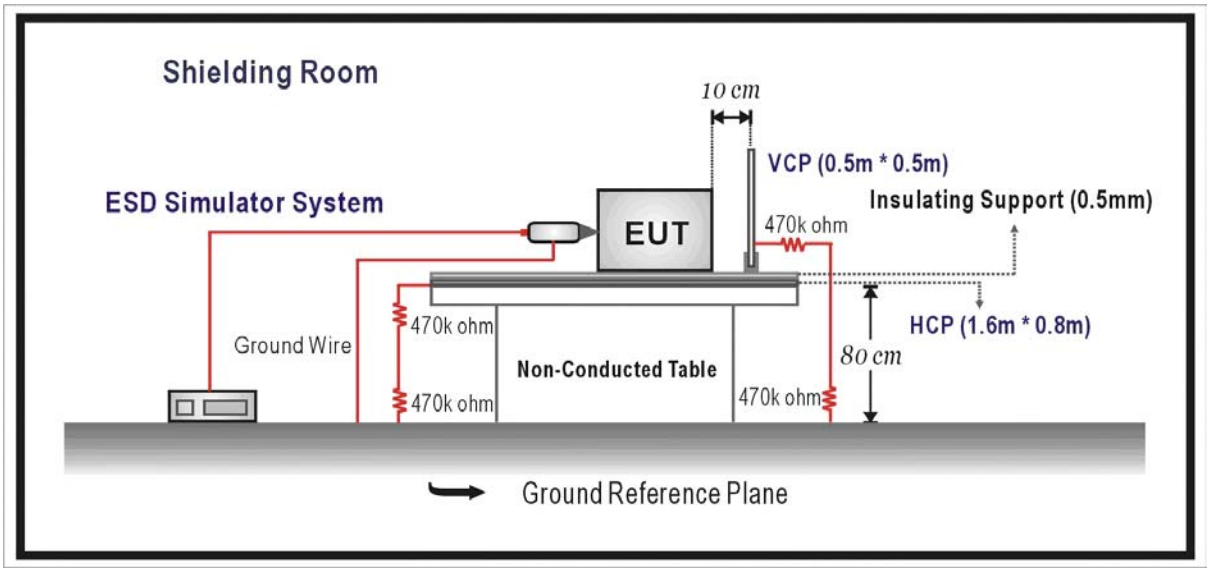
Description ：Flicker Test Setup

8. Electrostatic Discharge

8.1. Test Specification

According to Standard : IEC 61000-4-2

8.2. Test Setup



8.3. Limit

Item	Environmental Phenomena	Units	Test Specification	Performance Criteria
Enclosure Port				
	Electrostatic Discharge	kV(Charge Voltage)	±8 Air Discharge ±4 Contact Discharge	B

8.4. Test Procedure

Direct application of discharges to the EUT:

Contact discharge was applied only to conductive surfaces of the EUT.

Air discharges were applied only to non-conductive surfaces of the EUT.

During the test, it was performed with single discharges. For the single discharge time between successive single discharges will be keep longer 1 second. It was at least ten single discharges with positive and negative at the same selected point.

The selected point, which was performed with electrostatic discharge, was marked on the red label of the EUT.

Indirect application of discharges to the EUT:

Vertical Coupling Plane (VCP):

The coupling plane, of dimensions 0.5m x 0.5m, is placed parallel to, and positioned at a distance 0.1m from, the EUT, with the Discharge Electrode touching the coupling plane.

The four faces of the EUT will be performed with electrostatic discharge. It was at least ten single discharges with positive and negative at the same selected point.

Horizontal Coupling Plane (HCP):

The coupling plane is placed under to the EUT. The generator shall be positioned vertically at a distance of 0.1m from the EUT, with the Discharge Electrode touching the coupling plane.

The four faces of the EUT will be performed with electrostatic discharge. It was at least ten single discharges with positive and negative at the same selected point.

8.5. Deviation from Test Standard

No deviation.

8.6. Test Result

Product	Personal Computer		
Test Item	Electrostatic Discharge		
Test Mode	Mode 1: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (LI SHIN)		
Date of Test	2008/05/05	Test Site	No.3 Shielded Room

Item	Amount of Discharge	Voltage	Required Criteria	Complied To Criteria (A,B,C)	Results
Air Discharge	10	+8kV	B	B	Pass
	10	-8kV	B	B	Pass
Contact Discharge	25	+4kV	B	A	Pass
	25	-4kV	B	A	Pass
Indirect Discharge (HCP)	50	+4kV	B	A	Pass
	50	-4kV	B	A	Pass
Indirect Discharge (VCP Front)	50	+4kV	B	A	Pass
	50	-4kV	B	A	Pass
Indirect Discharge (VCP Left)	50	+4kV	B	A	Pass
	50	-4kV	B	A	Pass
Indirect Discharge (VCP Back)	50	+4kV	B	A	Pass
	50	-4kV	B	A	Pass
Indirect Discharge (VCP Right)	50	+4kV	B	A	Pass
	50	-4kV	B	A	Pass

Note:

The testing performed is from lowest level up to the highest level as required by standard, but only highest level is shown on the report.

NR: No Requirement

☒ Meet criteria A: Operate as intended during and after the test

☒ Meet criteria B: Operate as intended after the test

☐ Meet criteria C: Loss/Error of function

☐ Additional Information

☐ EUT stopped operation and could / could not be reset by operator at ____ kV.

☒ No false alarms or other malfunctions were observed during or after the test.

Remark:

The Contact discharges were applied at least total 200 discharges at a minimum of four test points.

Product	Personal Computer		
Test Item	Electrostatic Discharge		
Test Mode	Mode 2: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (DELTA)		
Date of Test	2008/05/07	Test Site	No.3 Shielded Room

Item	Amount of Discharge	Voltage	Required Criteria	Complied To Criteria (A,B,C)	Results
Air Discharge	10	+8kV	B	B	Pass
	10	-8kV	B	B	Pass
Contact Discharge	25	+4kV	B	A	Pass
	25	-4kV	B	A	Pass
Indirect Discharge (HCP)	50	+4kV	B	A	Pass
	50	-4kV	B	A	Pass
Indirect Discharge (VCP Front)	50	+4kV	B	A	Pass
	50	-4kV	B	A	Pass
Indirect Discharge (VCP Left)	50	+4kV	B	A	Pass
	50	-4kV	B	A	Pass
Indirect Discharge (VCP Back)	50	+4kV	B	A	Pass
	50	-4kV	B	A	Pass
Indirect Discharge (VCP Right)	50	+4kV	B	A	Pass
	50	-4kV	B	A	Pass

Note:

The testing performed is from lowest level up to the highest level as required by standard, but only highest level is shown on the report.

NR: No Requirement

☒ Meet criteria A: Operate as intended during and after the test

☒ Meet criteria B: Operate as intended after the test

☐ Meet criteria C: Loss/Error of function

☐ Additional Information

☐ EUT stopped operation and could / could not be reset by operator at ____ kV.

☒ No false alarms or other malfunctions were observed during or after the test.

Remark:

The Contact discharges were applied at least total 200 discharges at a minimum of four test points.

Product	Personal Computer		
Test Item	Electrostatic Discharge		
Test Mode	Mode 3: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (BesTec)		
Date of Test	2008/05/21	Test Site	No.3 Shielded Room

Item	Amount of Discharge	Voltage	Required Criteria	Complied To Criteria (A,B,C)	Results
Air Discharge	10	+8kV	B	B	Pass
	10	-8kV	B	B	Pass
Contact Discharge	25	+4kV	B	A	Pass
	25	-4kV	B	A	Pass
Indirect Discharge (HCP)	50	+4kV	B	A	Pass
	50	-4kV	B	A	Pass
Indirect Discharge (VCP Front)	50	+4kV	B	A	Pass
	50	-4kV	B	A	Pass
Indirect Discharge (VCP Left)	50	+4kV	B	A	Pass
	50	-4kV	B	A	Pass
Indirect Discharge (VCP Back)	50	+4kV	B	A	Pass
	50	-4kV	B	A	Pass
Indirect Discharge (VCP Right)	50	+4kV	B	A	Pass
	50	-4kV	B	A	Pass

Note:

The testing performed is from lowest level up to the highest level as required by standard, but only highest level is shown on the report.

NR: No Requirement

☒ Meet criteria A: Operate as intended during and after the test

☒ Meet criteria B: Operate as intended after the test

☐ Meet criteria C: Loss/Error of function

☐ Additional Information

☐ EUT stopped operation and could / could not be reset by operator at ____ kV.

☒ No false alarms or other malfunctions were observed during or after the test.

Remark:

The Contact discharges were applied at least total 200 discharges at a minimum of four test points.

8.7. Test Photograph

Test Mode : Mode 1: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (LI SHIN)

Description : ESD Test Setup

Test Mode : Mode 2: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (DELTA)

Description : ESD Test Setup

Test Mode : Mode 3: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (BesTec)

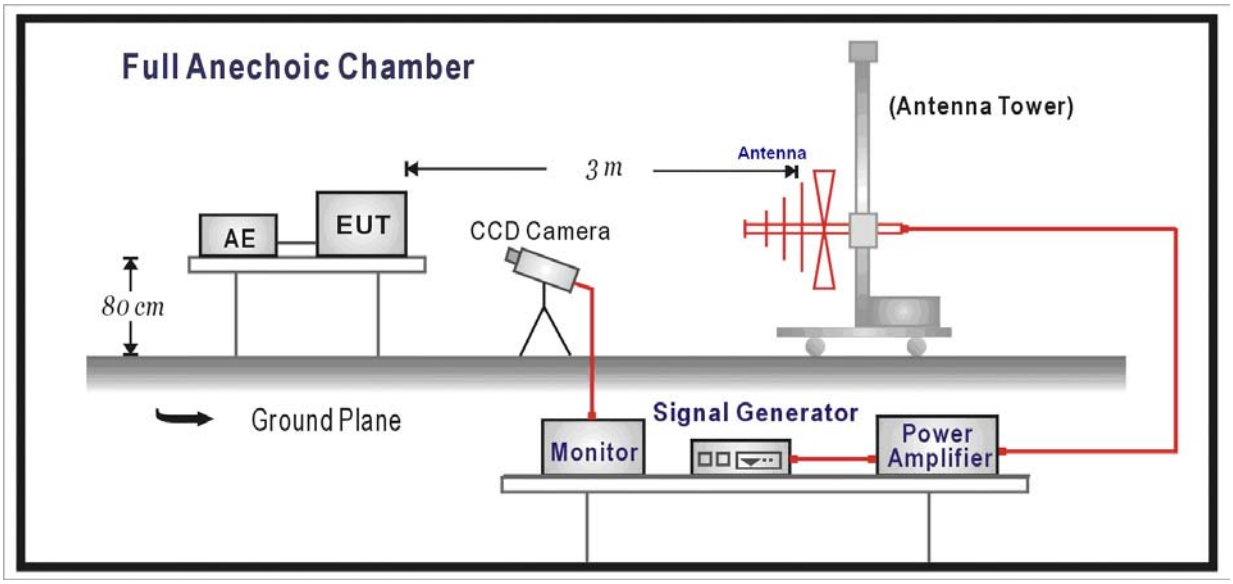
Description : ESD Test Setup

9. Radiated Susceptibility

9.1. Test Specification

According to Standard : IEC 61000-4-3

9.2. Test Setup



9.3. Limit

Item	Environmental Phenomena	Units	Test Specification	Performance Criteria
Enclosure Port				
	Radio-Frequency	MHz	80-1000	A
	Electromagnetic Field	V/m(Un-modulated, rms)	3	
	Amplitude Modulated	% AM (1kHz)	80	

9.4. Test Procedure

The EUT and load, which are placed on a table that is 0.8 meter above ground, are placed with one coincident with the calibration plane such that the distance from antenna to the EUT was 3 meters.
Both horizontal and vertical polarization of the antenna and four sides of the EUT are set on measurement.
In order to judge the EUT performance, a CCD camera is used to monitor EUT screen.

All the scanning conditions are as follows:

	Condition of Test	Remarks
1.	Field Strength	3 V/m Level 2
2.	Radiated Signal	AM 80% Modulated with 1kHz
3.	Scanning Frequency	80MHz - 1000MHz
4	Dwell Time	3 Seconds
5.	Frequency step size Δf :	1%
6.	The rate of Swept of Frequency	1.5 x 10^{-3} decades/s

9.5. Deviation from Test Standard

No deviation.

9.6. Test Result

Product	Personal Computer		
Test Item	Radiated susceptibility		
Test Mode	Mode 1: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (LI SHIN)		
Date of Test	2008/05/02	Test Site	Chamber5

Frequency (MHz)	Position (Angle)	Polarity (H or V)	Field Strength (V/m)	Required Criteria	Complied To Criteria (A,B,C)	Results
80-1000	FRONT	H	3	A	A	PASS
80-1000	FRONT	V	3	A	A	PASS
80-1000	BACK	H	3	A	A	PASS
80-1000	BACK	V	3	A	A	PASS
80-1000	RIGHT	H	3	A	A	PASS
80-1000	RIGHT	V	3	A	A	PASS
80-1000	LEFT	H	3	A	A	PASS
80-1000	LEFT	V	3	A	A	PASS
80-1000	UP	H	3	A	A	PASS
80-1000	UP	V	3	A	A	PASS
80-1000	DOWN	H	3	A	A	PASS
80-1000	DOWN	V	3	A	A	PASS

Note:

The testing performed is from lowest level up to the highest level as required by standard, but only highest level is shown on the report.

☒ Meet criteria A: Operate as intended during and after the test
☐ Meet criteria B: Operate as intended after the test
☐ Meet criteria C: Loss/Error of function
☐ Additional Information
  ☐ There was no observable degradation in performance.
  ☐ EUT stopped operation and could / could not be reset by operator at _____ V/m at frequency _____MHz.

☒ No false alarms or other malfunctions were observed during or after the test.

Product	Personal Computer		
Test Item	Radiated susceptibility		
Test Mode	Mode 2: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (DELTA)		
Date of Test	2008/05/02	Test Site	Chamber5

Frequency (MHz)	Position (Angle)	Polarity (H or V)	Field Strength (V/m)	Required Criteria	Complied To Criteria (A,B,C)	Results
80-1000	FRONT	H	3	A	A	PASS
80-1000	FRONT	V	3	A	A	PASS
80-1000	BACK	H	3	A	A	PASS
80-1000	BACK	V	3	A	A	PASS
80-1000	RIGHT	H	3	A	A	PASS
80-1000	RIGHT	V	3	A	A	PASS
80-1000	LEFT	H	3	A	A	PASS
80-1000	LEFT	V	3	A	A	PASS
80-1000	UP	H	3	A	A	PASS
80-1000	UP	V	3	A	A	PASS
80-1000	DOWN	H	3	A	A	PASS
80-1000	DOWN	V	3	A	A	PASS

Note:

The testing performed is from lowest level up to the highest level as required by standard, but only highest level is shown on the report.

☒ Meet criteria A: Operate as intended during and after the test
☐ Meet criteria B: Operate as intended after the test
☐ Meet criteria C: Loss/Error of function
☐ Additional Information
  ☐ There was no observable degradation in performance.
  ☐ EUT stopped operation and could / could not be reset by operator at _____ V/m at frequency _____MHz.

☒ No false alarms or other malfunctions were observed during or after the test.

Product	Personal Computer		
Test Item	Radiated susceptibility		
Test Mode	Mode 3: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (BesTec)		
Date of Test	2008/05/21	Test Site	Chamber5

Frequency (MHz)	Position (Angle)	Polarity (H or V)	Field Strength (V/m)	Required Criteria	Complied To Criteria (A,B,C)	Results
80-1000	FRONT	H	3	A	A	PASS
80-1000	FRONT	V	3	A	A	PASS
80-1000	BACK	H	3	A	A	PASS
80-1000	BACK	V	3	A	A	PASS
80-1000	RIGHT	H	3	A	A	PASS
80-1000	RIGHT	V	3	A	A	PASS
80-1000	LEFT	H	3	A	A	PASS
80-1000	LEFT	V	3	A	A	PASS
80-1000	UP	H	3	A	A	PASS
80-1000	UP	V	3	A	A	PASS
80-1000	DOWN	H	3	A	A	PASS
80-1000	DOWN	V	3	A	A	PASS

Note:

The testing performed is from lowest level up to the highest level as required by standard, but only highest level is shown on the report.

☒ Meet criteria A: Operate as intended during and after the test
☐ Meet criteria B: Operate as intended after the test
☐ Meet criteria C: Loss/Error of function
☐ Additional Information
  ☐ There was no observable degradation in performance.
  ☐ EUT stopped operation and could / could not be reset by operator at _____ V/m at frequency _____MHz.

☒ No false alarms or other malfunctions were observed during or after the test.

9.7. Test Photograph

Test Mode : Mode 1: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (LI SHIN)

Description : Radiated Susceptibility Test Setup

Test Mode : Mode 2: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (DELTA)

Description : Radiated Susceptibility Test Setup

Test Mode : Mode 3: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (BesTec)

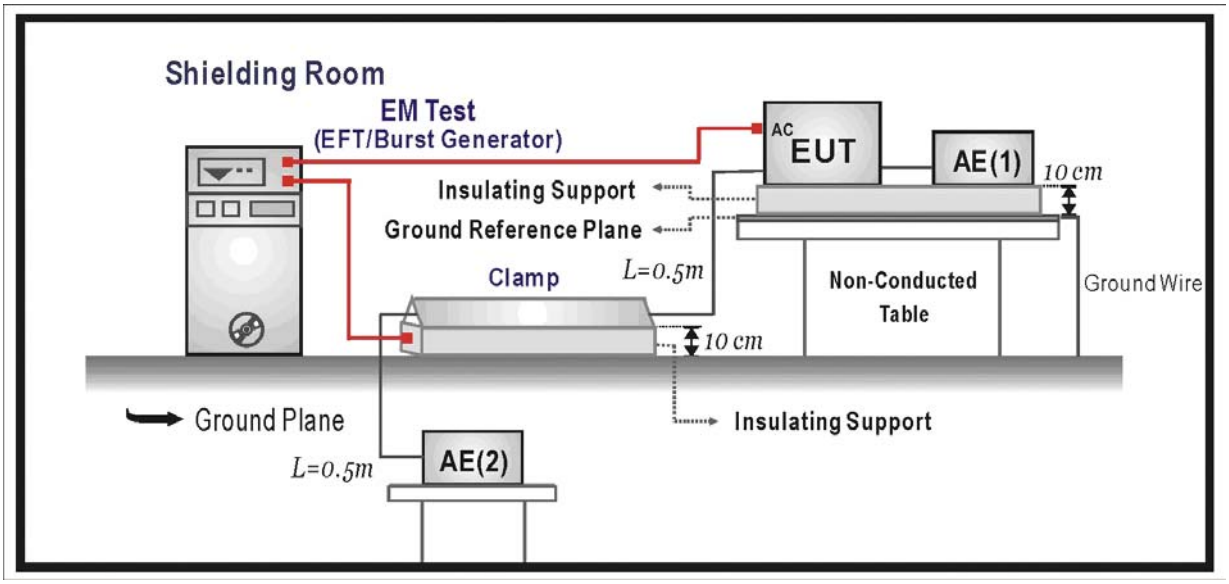
Description : Radiated Susceptibility Test Setup

10. Electrical Fast Transient/Burst

10.1. Test Specification

According to Standard : IEC 61000-4-4

10.2. Test Setup



10.3. Limit

Item	Environmental Phenomena	Units	Test Specification	Performance Criteria
I/O and communication ports				
	Fast Transients Common Mode	kV (Peak) Tr/Th ns Rep. Frequency kHz	±0.5 5/50 5	B
Input DC Power Ports				
	Fast Transients Common Mode	kV (Peak) Tr/Th ns Rep. Frequency kHz	±0.5 5/50 5	B
Input AC Power Ports				
	Fast Transients Common Mode	kV (Peak) Tr/Th ns Rep. Frequency kHz	±1 5/50 5	B

10.4. Test Procedure

The EUT is placed on a table that is 0.8 meter height. A ground reference plane is placed on the table, and uses a 0.1m insulation between the EUT and ground reference plane.
The minimum area of the ground reference plane is 1m*1m, and 0.65mm thick min, and projected beyond the EUT by at least 0.1m on all sides.

Test on I/O and communication ports:
The EFT interference signal is through a coupling clamp device couples to the signal and control lines of the EUT with burst noise for 1minute.

Test on power supply ports:
The EUT is connected to the power mains through a coupling device that directly couples the EFT/B interference signal.
Each of the Line and Neutral conductors is impressed with burst noise for 1 minute.

The length of the signal and power lines between the coupling device and the EUT is 0.5m.

10.5. Deviation from Test Standard

No deviation.

10.6. Test Result

Product	Personal Computer		
Test Item	Electrical fast transient/burst		
Test Mode	Mode 1: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (LI SHIN)		
Date of Test	2008/05/02	Test Site	No.6 Shielded Room

Inject Line	Polarity	Voltage kV	Inject Time (Second)	Inject Method	Required Criteria	Complied to Criteria	Result
L-N-PE	±	1kV	60	Direct	B	A	PASS
LAN	±	0.5kV	60	Clamp	B	A	PASS

Note:

The testing performed is from lowest level up to the highest level as required by standard, but only highest level is shown on the report.

☒ Meet criteria A : Operate as intended during and after the test
☐ Meet criteria B : Operate as intended after the test
☐ Meet criteria C : Loss/Error of function
☐ Additional Information
  ☐ EUT stopped operation and could / could not be reset by operator at _____ kV of Line _____.
☒ No false alarms or other malfunctions were observed during or after the test.

Product	Personal Computer		
Test Item	Electrical fast transient/burst		
Test Mode	Mode 2: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (DELTA)		
Date of Test	2008/05/02	Test Site	No.6 Shielded Room

Inject Line	Polarity	Voltage kV	Inject Time (Second)	Inject Method	Required Criteria	Complied to Criteria	Result
L-N-PE	±	1kV	60	Direct	B	A	PASS
LAN	±	0.5kV	60	Clamp	B	A	PASS

Note:

The testing performed is from lowest level up to the highest level as required by standard, but only highest level is shown on the report.

☒ Meet criteria A : Operate as intended during and after the test
☐ Meet criteria B : Operate as intended after the test
☐ Meet criteria C : Loss/Error of function
☐ Additional Information
  ☐ EUT stopped operation and could / could not be reset by operator at _____ kV of Line _____.
☒ No false alarms or other malfunctions were observed during or after the test.

Product	Personal Computer		
Test Item	Electrical fast transient/burst		
Test Mode	Mode 3: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (BesTec)		
Date of Test	2008/05/20	Test Site	No.6 Shielded Room

Inject Line	Polarity	Voltage kV	Inject Time (Second)	Inject Method	Required Criteria	Complied to Criteria	Result
L-N-PE	±	1kV	60	Direct	B	A	PASS
LAN	±	0.5kV	60	Clamp	B	A	PASS

Note:

The testing performed is from lowest level up to the highest level as required by standard, but only highest level is shown on the report.

☒ Meet criteria A : Operate as intended during and after the test
☐ Meet criteria B : Operate as intended after the test
☐ Meet criteria C : Loss/Error of function
☐ Additional Information
  ☐ EUT stopped operation and could / could not be reset by operator at _____ kV of Line _____.
☒ No false alarms or other malfunctions were observed during or after the test.

10.7. Test Photograph

Test Mode : Mode 1: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (LI SHIN)

Description : EFT/B Test Setup

Test Mode : Mode 1: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (LI SHIN)

Description : EFT/B Test Setup-Clamp

Test Mode : Mode 2: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (DELTA)

Description : EFT/B Test Setup

Test Mode : Mode 2: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (DELTA)

Description : EFT/B Test Setup-Clamp

Test Mode : Mode 3: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (BesTec)

Description : EFT/B Test Setup

Test Mode : Mode 3: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (BesTec)

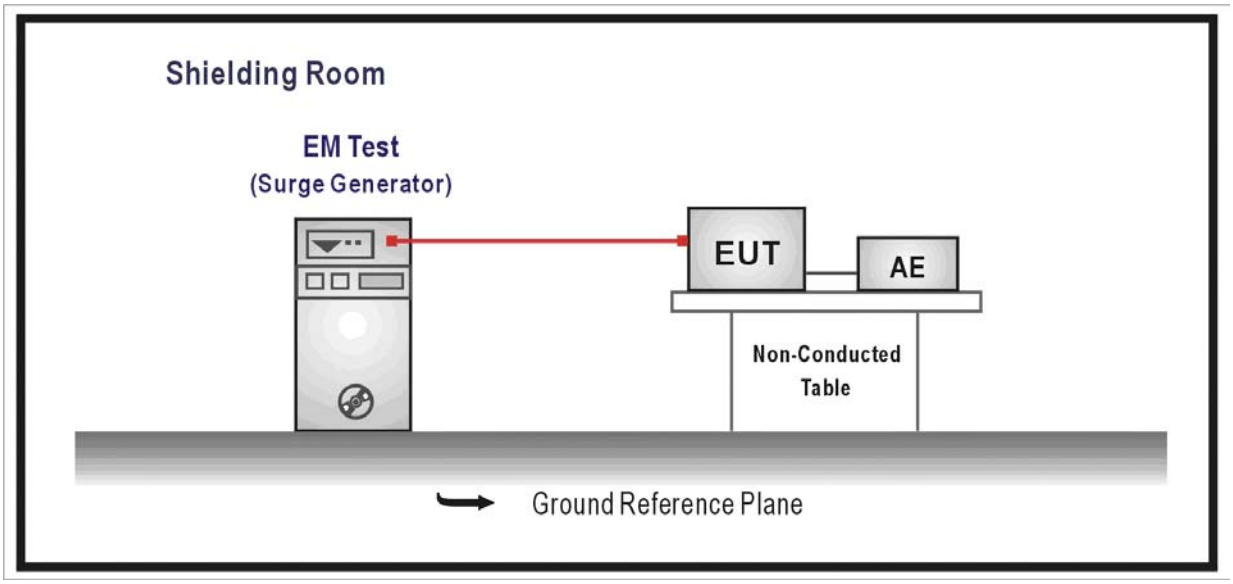
Description : EFT/B Test Setup-Clamp

11. Surge

11.1. Test Specification

According to Standard : IEC 61000-4-5

11.2. Test Setup



11.3. Limit

Item	Environmental Phenomena	Units	Test Specification	Performance Criteria
Signal Ports and Telecommunication Ports(See 1) and 2))				
	Surges Line to Ground	Tr/Th us kV	1.2/50 (8/20) ± 1	B
Input DC Power Ports				
	Surges Line to Ground	Tr/Th us kV	1.2/50 (8/20) ± 0.5	B
AC Input and AC Output Power Ports				
	Surges Line to Line Line to Ground	Tr/Th us kV kV	1.2/50 (8/20) ± 1 ± 2	B

Notes:

1) Applicable only to ports which according to the manufacturer's may directly to outdoor cables.
2) Where normal functioning cannot be achieved because of the impact of the CDN on the EUT, no immunity test shall be required.

11.4. Test Procedure

The EUT and its load are placed on a table that is 0.8 meter above a metal ground plane measured 1m*1m min. and 0.65mm thick min. And projected beyond the EUT by at least 0.1m on all sides. The length of power cord between the coupling device and the EUT shall be 2m or less.

For Input and Output AC Power or DC Input and DC Output Power Ports:

The EUT is connected to the power mains through a coupling device that directly couples the Surge interference signal.

The surge noise shall be applied synchronized to the voltage phase at 0^0, 90^0, 180^0, 270^0 and the peak value of the a.c. voltage wave. (Positive and negative)

Each of Line-Earth and Line-Line is impressed with a sequence of five surge voltages with interval of 1 min.

11.5. Deviation from Test Standard

No deviation.

11.6. Test Result

Product	Personal Computer		
Test Item	Surge		
Test Mode	Mode 1: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (LI SHIN)		
Date of Test	2008/05/02	Test Site	No.6 Shielded Room

Inject Line	Polarity	Angle	Voltage kV	Time Interval (Second)	Inject Method	Required Criteria	Complied to Criteria	Result
L-N	±	0	1kV	60	Direct	B	A	PASS
L-N	±	90	1kV	60	Direct	B	A	PASS
L-N	±	180	1kV	60	Direct	B	A	PASS
L-N	±	270	1kV	60	Direct	B	A	PASS
L-PE	±	0	2kV	60	Direct	B	A	PASS
L-PE	±	90	2kV	60	Direct	B	A	PASS
L-PE	±	180	2kV	60	Direct	B	A	PASS
L-PE	±	270	2kV	60	Direct	B	A	PASS
N-PE	±	0	2kV	60	Direct	B	A	PASS
N-PE	±	90	2kV	60	Direct	B	A	PASS
N-PE	±	180	2kV	60	Direct	B	A	PASS
N-PE	±	270	2kV	60	Direct	B	A	PASS

Note:

The testing performed is from lowest level up to the highest level as required by standard, but only highest level is shown on the report.

☒ Meet criteria A : Operate as intended during and after the test
☐ Meet criteria B : Operate as intended after the test
☐ Meet criteria C : Loss/Error of function
☐ Additional Information
☐ EUT stopped operation and could / could not be reset by operator at _____ kV of Line _____.

☒ No false alarms or other malfunctions were observed during or after the test.

Product	Personal Computer		
Test Item	Surge		
Test Mode	Mode 2: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (DELTA)		
Date of Test	2008/05/02	Test Site	No.6 Shielded Room

Inject Line	Polarity	Angle	Voltage kV	Time Interval (Second)	Inject Method	Required Criteria	Complied to Criteria	Result
L-N	±	0	1kV	60	Direct	B	A	PASS
L-N	±	90	1kV	60	Direct	B	A	PASS
L-N	±	180	1kV	60	Direct	B	A	PASS
L-N	±	270	1kV	60	Direct	B	A	PASS
L-PE	±	0	2kV	60	Direct	B	A	PASS
L-PE	±	90	2kV	60	Direct	B	A	PASS
L-PE	±	180	2kV	60	Direct	B	A	PASS
L-PE	±	270	2kV	60	Direct	B	A	PASS
N-PE	±	0	2kV	60	Direct	B	A	PASS
N-PE	±	90	2kV	60	Direct	B	A	PASS
N-PE	±	180	2kV	60	Direct	B	A	PASS
N-PE	±	270	2kV	60	Direct	B	A	PASS

Note:

The testing performed is from lowest level up to the highest level as required by standard, but only highest level is shown on the report.

☒ Meet criteria A : Operate as intended during and after the test
☐ Meet criteria B : Operate as intended after the test
☐ Meet criteria C : Loss/Error of function
☐ Additional Information
  ☐ EUT stopped operation and could / could not be reset by operator at _____ kV of Line _____.

☒ No false alarms or other malfunctions were observed during or after the test.

Product	Personal Computer		
Test Item	Surge		
Test Mode	Mode 3: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (BesTec)		
Date of Test	2008/05/20	Test Site	No.6 Shielded Room

Inject Line	Polarity	Angle	Voltage kV	Time Interval (Second)	Inject Method	Required Criteria	Complied to Criteria	Result
L-N	±	0	1kV	60	Direct	B	A	PASS
L-N	±	90	1kV	60	Direct	B	A	PASS
L-N	±	180	1kV	60	Direct	B	A	PASS
L-N	±	270	1kV	60	Direct	B	A	PASS
L-PE	±	0	2kV	60	Direct	B	A	PASS
L-PE	±	90	2kV	60	Direct	B	A	PASS
L-PE	±	180	2kV	60	Direct	B	A	PASS
L-PE	±	270	2kV	60	Direct	B	A	PASS
N-PE	±	0	2kV	60	Direct	B	A	PASS
N-PE	±	90	2kV	60	Direct	B	A	PASS
N-PE	±	180	2kV	60	Direct	B	A	PASS
N-PE	±	270	2kV	60	Direct	B	A	PASS

Note:

The testing performed is from lowest level up to the highest level as required by standard, but only highest level is shown on the report.

☒ Meet criteria A : Operate as intended during and after the test
☐ Meet criteria B : Operate as intended after the test
☐ Meet criteria C : Loss/Error of function
☐ Additional Information
☐ EUT stopped operation and could / could not be reset by operator at _____ kV of Line _____.

☒ No false alarms or other malfunctions were observed during or after the test.

11.7. Test Photograph

Test Mode : Mode 1: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (LI SHIN)

Description : SURGE Test Setup

Test Mode : Mode 2: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (DELTA)

Description : SURGE Test Setup

Test Mode : Mode 3: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (BesTec)

Description : SURGE Test Setup

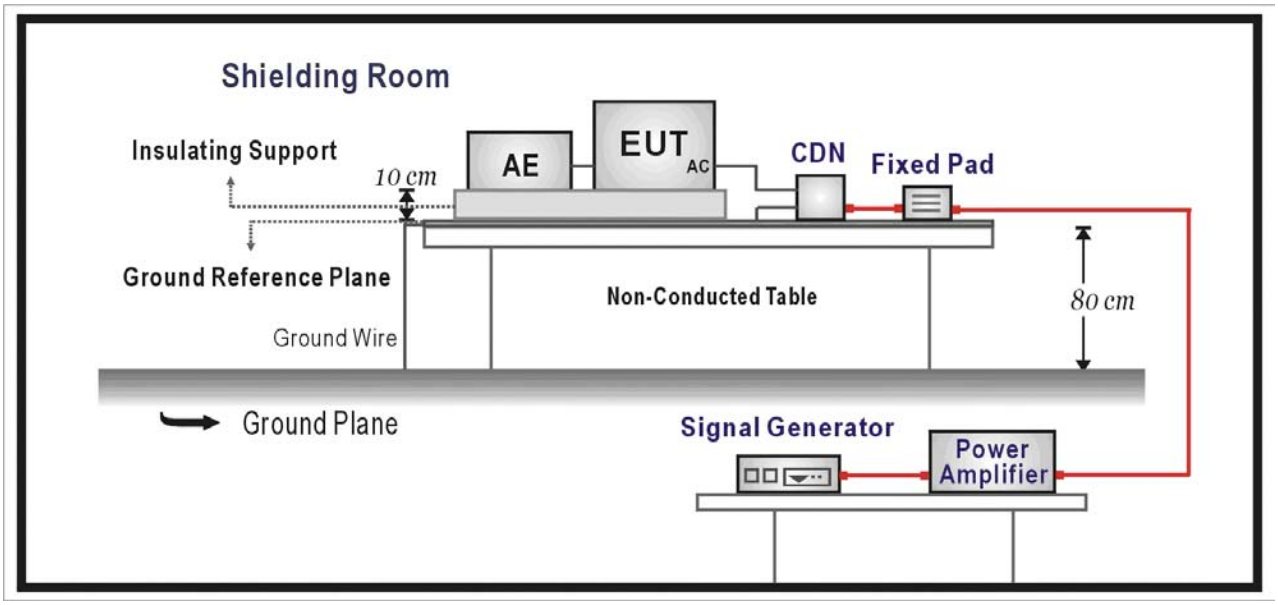
12. Conducted Susceptibility

12.1. Test Specification

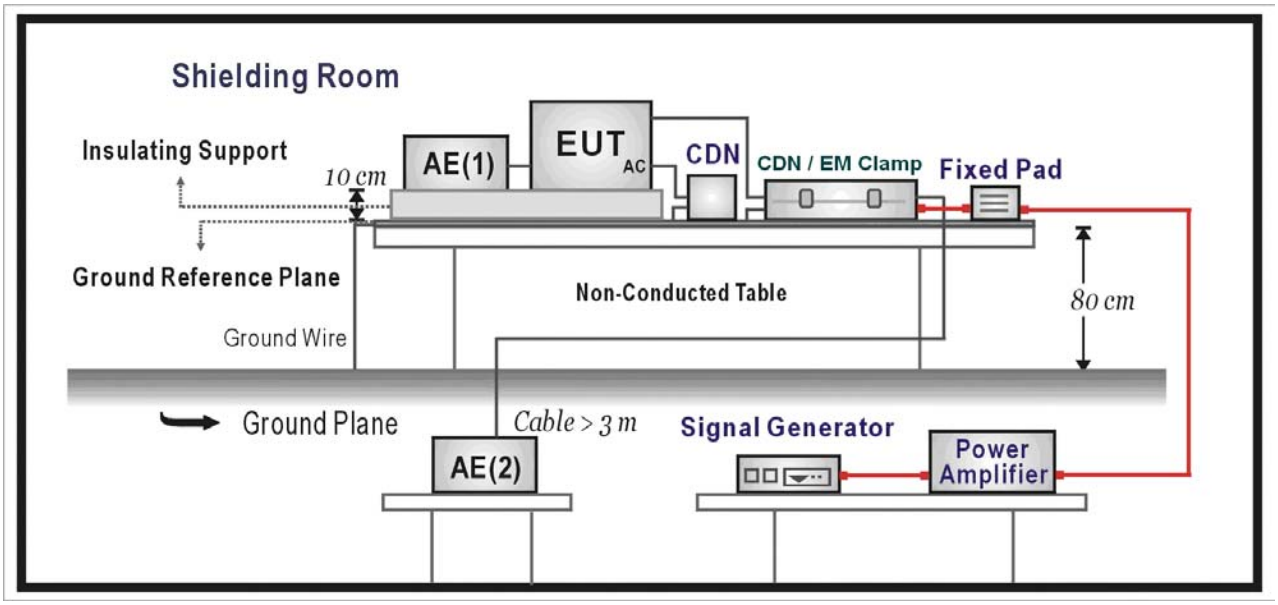
According to Standard : IEC 61000-4-6

12.2. Test Setup

CDN Test Mode



EM Clamp Test Mode



12.3. Limit

Item	Environmental Phenomena	Units	Test Specification	Performance Criteria
Signal Ports and Telecommunication Ports				
	Radio-Frequency Continuous Conducted	MHz V (rms, Un-modulated) % AM (1kHz)	0.15-80 3 80	A
Input DC Power Ports				
	Radio-Frequency Continuous Conducted	MHz V (rms, Un-modulated) % AM (1kHz)	0.15-80 3 80	A
Input AC Power Ports				
	Radio-Frequency Continuous Conducted	MHz V (rms, Un-modulated) % AM (1kHz)	0.15-80 3 80	A

12.4. Test Procedure

The EUT are placed on a table that is 0.8 meter height, and a Ground reference plane on the table, EUT are placed upon table and use a 10cm insulation between the EUT and Ground reference plane.
For Signal Ports and Telecommunication Ports
The disturbance signal is through a coupling and decoupling networks (CDN) or EM-clamp device couples to the signal and Telecommunication lines of the EUT.
For Input DC and AC Power Ports
The EUT is connected to the power mains through a coupling and decoupling networks for power supply lines. And directly couples the disturbances signal into EUT.
Used CDN-M2 for two wires or CDN-M3 for three wires.

All the scanning conditions are as follows:

	Condition of Test	Remarks
1.	Field Strength	130dBuV(3V) Level 2
2.	Radiated Signal	AM 80% Modulated with 1kHz
3.	Scanning Frequency	0.15MHz – 80MHz
4	Dwell Time	3 Seconds
5.	Frequency step size Δf :	1%
6.	The rate of Swept of Frequency	1.5 x 10^{-3} decades/s

12.5. Deviation from Test Standard

No deviation.

12.6. Test Result

Product	Personal Computer		
Test Item	Conducted susceptibility		
Test Mode	Mode 1: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (LI SHIN)		
Date of Test	2008/05/02	Test Site	No.6 Shielded Room

Frequency Range (MHz)	Voltage Applied dBuV(V)	Inject Method	Tested Port of EUT	Required Criteria	Performance Criteria Complied To	Result
0.15~80	130 (3V)	CDN	AC IN	A	A	PASS
0.15~80	130 (3V)	CDN	GIGA LAN	A	A	PASS
0.15~80	130 (3V)	CDN	LAN	A	A	PASS

Note:

The testing performed is from lowest level up to the highest level as required by standard, but only highest level is shown on the report.

☒ Meet criteria A : Operate as intended during and after the test
☐ Meet criteria B : Operate as intended after the test
☐ Meet criteria C : Loss/Error of function
☐ Additional Information
- ☐ EUT stopped operation and could / could not be reset by operator at _____ dBuV(V) at frequency _____MHz.
- ☒ No false alarms or other malfunctions were observed during or after the test. The acceptance criteria were met, and the EUT passed the test.

Product	Personal Computer		
Test Item	Conducted susceptibility		
Test Mode	Mode 2: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (DELTA)		
Date of Test	2008/05/02	Test Site	No.6 Shielded Room

Frequency Range (MHz)	Voltage Applied dBuV(V)	Inject Method	Tested Port of EUT	Required Criteria	Performance Criteria Complied To	Result
0.15~80	130 (3V)	CDN	AC IN	A	A	PASS
0.15~80	130 (3V)	CDN	GIGA LAN	A	A	PASS
0.15~80	130 (3V)	CDN	LAN	A	A	PASS

Note:

The testing performed is from lowest level up to the highest level as required by standard, but only highest level is shown on the report.

☒ Meet criteria A : Operate as intended during and after the test
☐ Meet criteria B : Operate as intended after the test
☐ Meet criteria C : Loss/Error of function
☐ Additional Information
- ☐ EUT stopped operation and could / could not be reset by operator at _____ dBuV(V) at frequency _____MHz.
- ☒ No false alarms or other malfunctions were observed during or after the test. The acceptance criteria were met, and the EUT passed the test.

Product	Personal Computer		
Test Item	Conducted susceptibility		
Test Mode	Mode 3: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (BesTec)		
Date of Test	2008/05/21	Test Site	No.6 Shielded Room

Frequency Range (MHz)	Voltage Applied dBuV(V)	Inject Method	Tested Port of EUT	Required Criteria	Performance Criteria Complied To	Result
0.15~80	130 (3V)	CDN	AC IN	A	A	PASS
0.15~80	130 (3V)	CDN	GIGA LAN	A	A	PASS
0.15~80	130 (3V)	CDN	LAN	A	A	PASS

Note:

The testing performed is from lowest level up to the highest level as required by standard, but only highest level is shown on the report.

☒ Meet criteria A : Operate as intended during and after the test
☐ Meet criteria B : Operate as intended after the test
☐ Meet criteria C : Loss/Error of function
☐ Additional Information
- ☐ EUT stopped operation and could / could not be reset by operator at _____ dBuV(V) at frequency _____MHz.
- ☒ No false alarms or other malfunctions were observed during or after the test. The acceptance criteria were met, and the EUT passed the test.

12.7. Test Photograph

Test Mode : Mode 1: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (LI SHIN)

Description : Conducted Susceptibility Test Setup

Test Mode : Mode 1: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (LI SHIN)

Description : Conducted Susceptibility Test Setup –CDN

Test Mode : Mode 2: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (DELTA)

Description : Conducted Susceptibility Test Setup

Test Mode : Mode 2: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (DELTA)

Description : Conducted Susceptibility Test Setup –CDN

Test Mode : Mode 3: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (BesTec)

Description : Conducted Susceptibility Test Setup

Test Mode : Mode 3: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (BesTec)

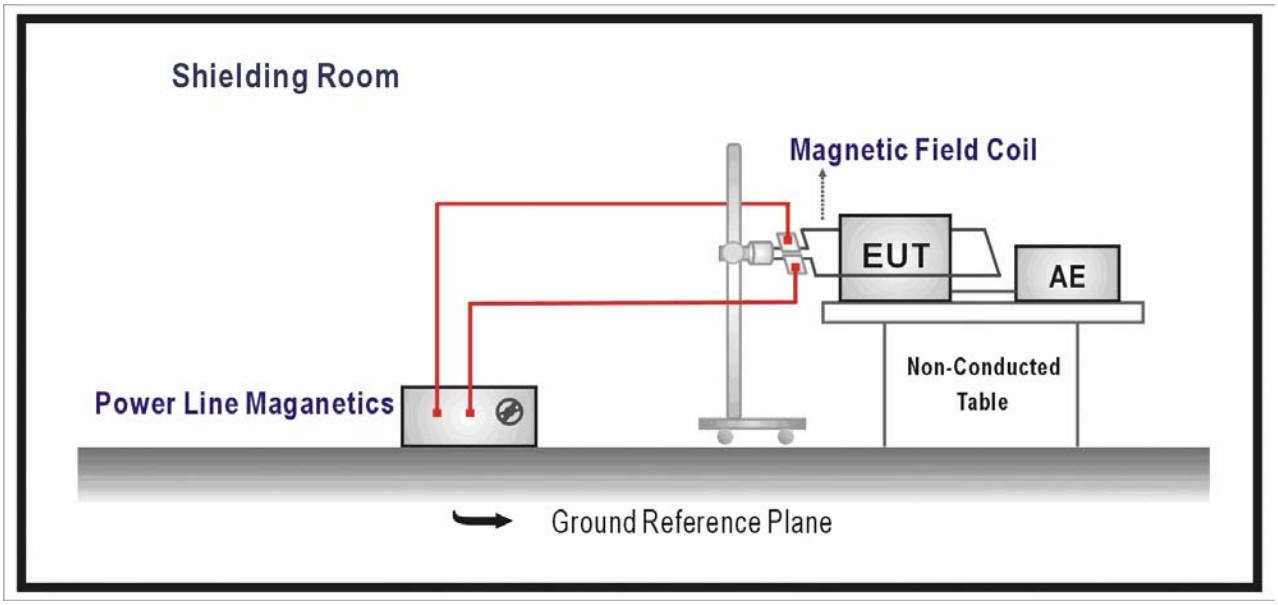
Description : Conducted Susceptibility Test Setup –CDN

13. Power Frequency Magnetic Field

13.1. Test Specification

According to Standard : IEC 61000-4-8

13.2. Test Setup



13.3. Limit

Item	Environmental Phenomena	Units	Test Specification	Performance Criteria
Enclosure Port				
	Power-Frequency Magnetic Field	Hz A/m (r.m.s.)	50 1	A

13.4. Test Procedure

The EUT and its load are placed on a table which is 0.8 meter above a metal ground plane measured at least 1m*1m min. The test magnetic field shall be placed at central of the induction coil.

The test magnetic Field shall be applied 10 minutes by the immersion method to the EUT. And the induction coil shall be rotated by 90° in order to expose the EUT to the test field with different orientation (X, Y, Z Orientations).

13.5. Deviation from Test Standard

No deviation.

13.6. Test Result

Product	Personal Computer		
Test Item	Power frequency magnetic field		
Test Mode	Mode 1: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (LI SHIN)		
Date of Test	2008/05/02	Test Site	No.3 Shielded Room

Polarization	Frequency (Hz)	Magnetic Strength (A/m)	Required Performance Criteria	Performance Criteria Complied To	Test Result
X Orientation	50	1	A	A	PASS
Y Orientation	50	1	A	A	PASS
Z Orientation	50	1	A	A	PASS

☒ Meet criteria A: Operate as intended during and after the test
☐ Meet criteria B: Operate as intended after the test
☐ Meet criteria C: Loss/Error of function
☐ Additional Information
☐ EUT stopped operation and could / could not be reset by operator at _____ kV of Line _____.

☒ No false alarms or other malfunctions were observed during or after the test. The acceptance criteria were met, and the EUT passed the test.

Product	Personal Computer		
Test Item	Power frequency magnetic field		
Test Mode	Mode 2: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (DELTA)		
Date of Test	2008/05/02	Test Site	No.3 Shielded Room

Polarization	Frequency (Hz)	Magnetic Strength (A/m)	Required Performance Criteria	Performance Criteria Complied To	Test Result
X Orientation	50	1	A	A	PASS
Y Orientation	50	1	A	A	PASS
Z Orientation	50	1	A	A	PASS

☒ Meet criteria A: Operate as intended during and after the test
☐ Meet criteria B: Operate as intended after the test
☐ Meet criteria C: Loss/Error of function
☐ Additional Information
☐ EUT stopped operation and could / could not be reset by operator at _____ kV of Line _____.

☒ No false alarms or other malfunctions were observed during or after the test. The acceptance criteria were met, and the EUT passed the test.

Product	Personal Computer		
Test Item	Power frequency magnetic field		
Test Mode	Mode 3: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (BesTec)		
Date of Test	2008/05/20	Test Site	No.3 Shielded Room

Polarization	Frequency (Hz)	Magnetic Strength (A/m)	Required Performance Criteria	Performance Criteria Complied To	Test Result
X Orientation	50	1	A	A	PASS
Y Orientation	50	1	A	A	PASS
Z Orientation	50	1	A	A	PASS

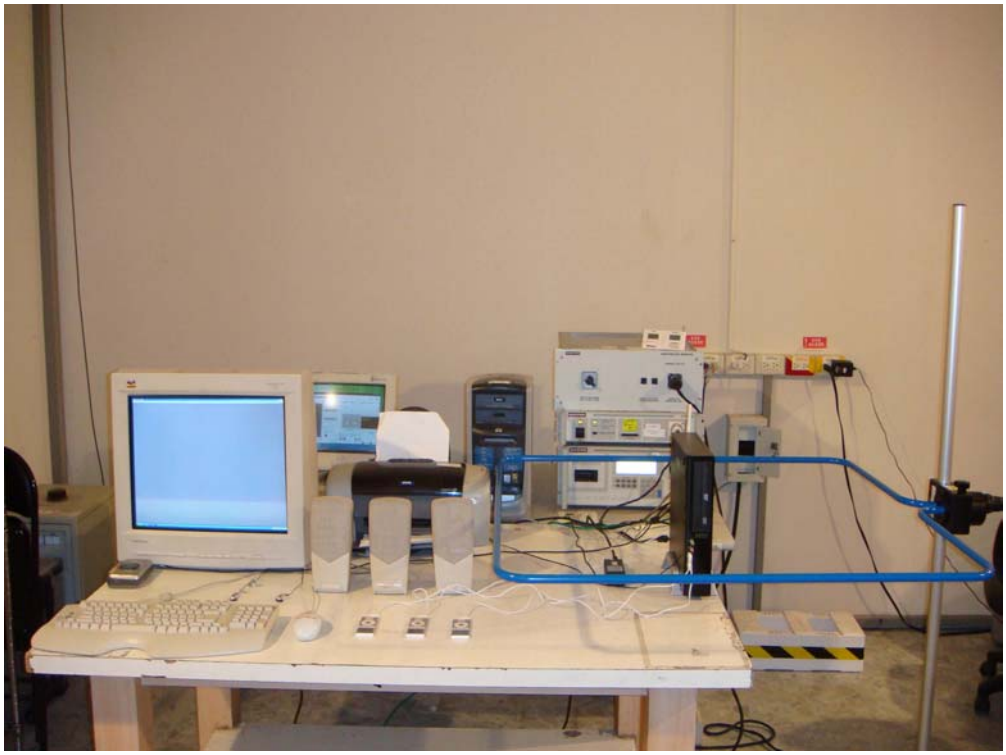
☒ Meet criteria A: Operate as intended during and after the test
☐ Meet criteria B: Operate as intended after the test
☐ Meet criteria C: Loss/Error of function
☐ Additional Information
☐ EUT stopped operation and could / could not be reset by operator at _____ kV of Line _____.

☒ No false alarms or other malfunctions were observed during or after the test. The acceptance criteria were met, and the EUT passed the test.

13.7. Test Photograph

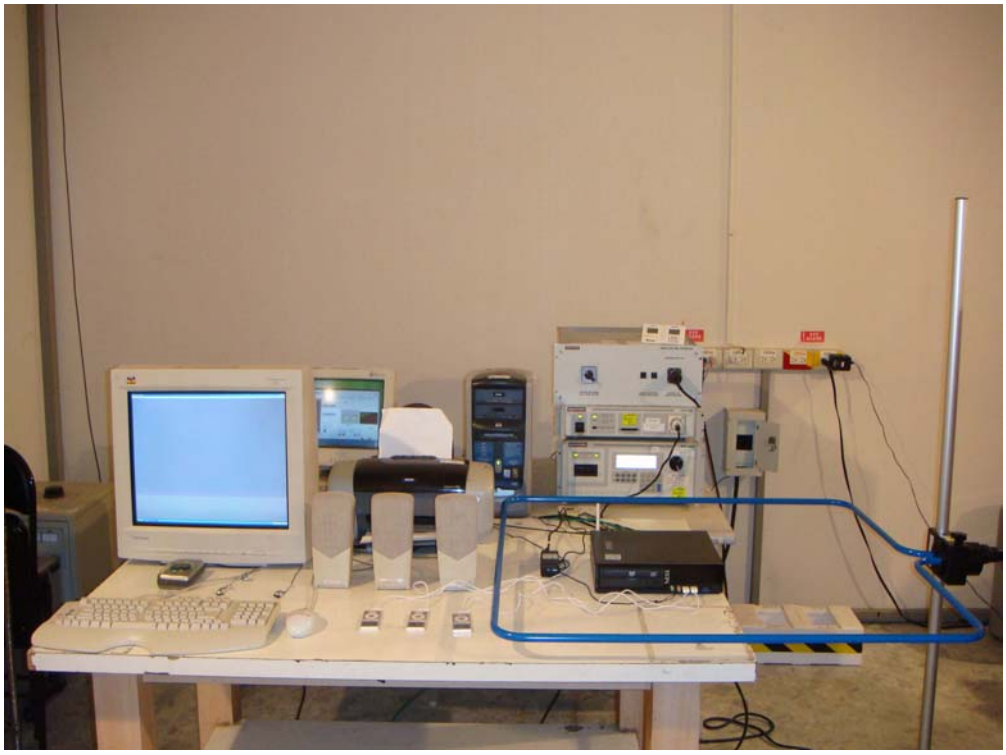
Test Mode : Mode 1: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (LI SHIN)

Description : Power Frequency Magnetic Field Test Setup



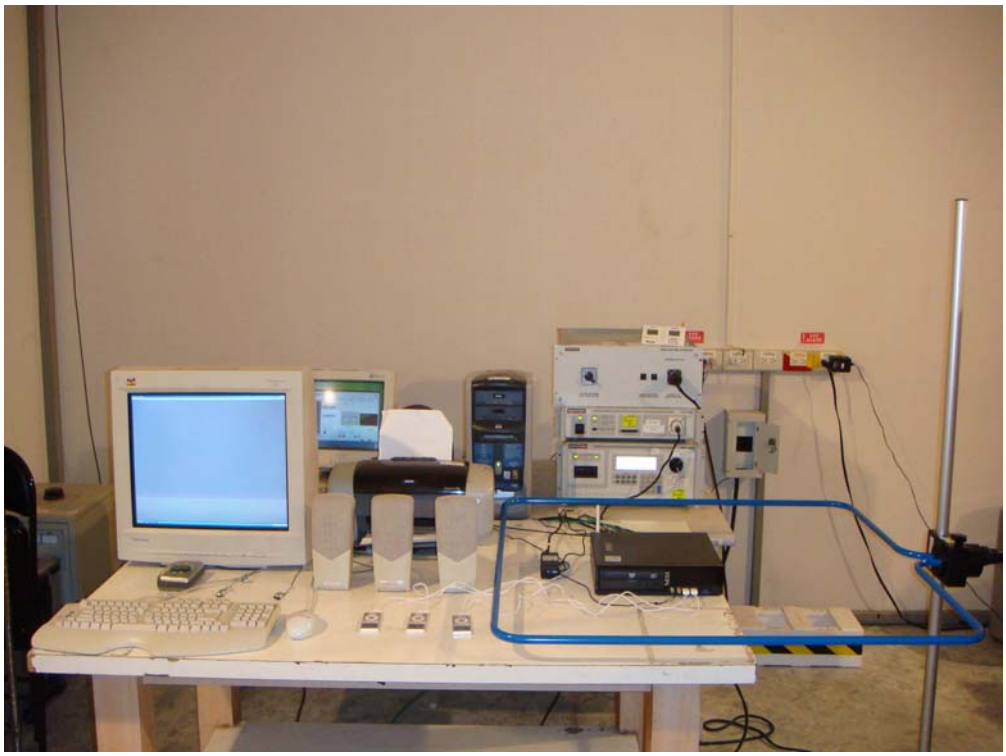
Test Mode : Mode 2: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (DELTA)

Description : Power Frequency Magnetic Field Test Setup



Test Mode : Mode 3: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (BesTec)

Description : Power Frequency Magnetic Field Test Setup

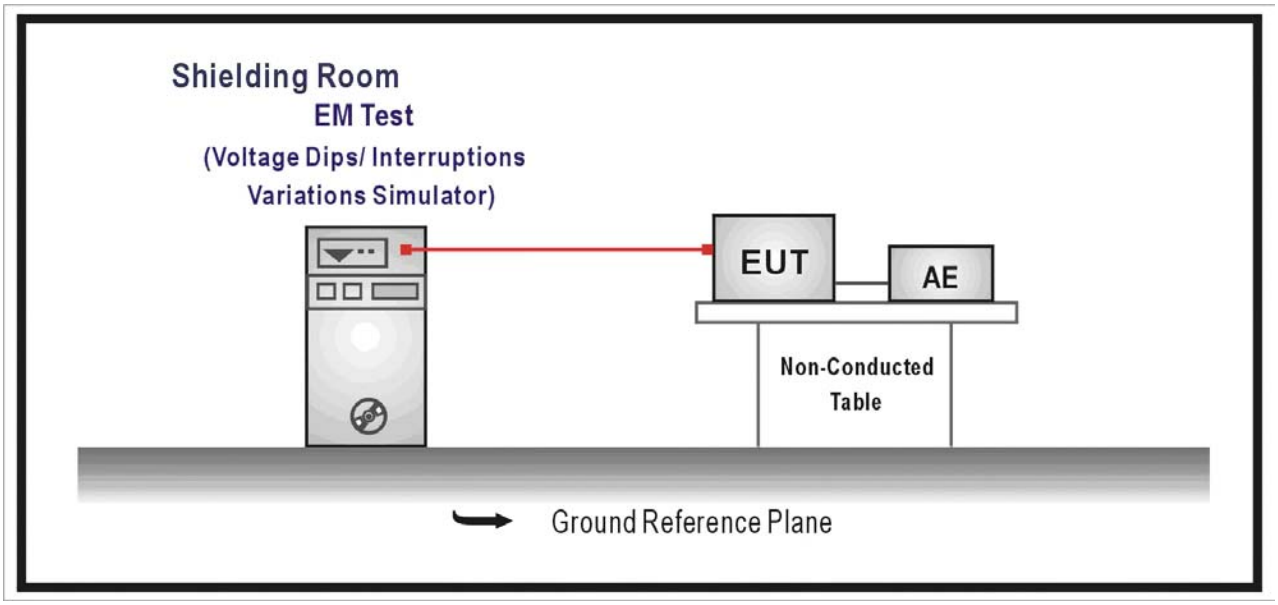


14. Voltage Dips and Interruption

14.1. Test Specification

According to Standard : IEC 61000-4-11

14.2. Test Setup



14.3. Limit

Item	Environmental Phenomena	Units	Test Specification	Performance Criteria
Input AC Power Ports				
	Voltage Dips	% Reduction Period	30 25	C
		% Reduction Period	>95 0.5	B
	Voltage Interruptions	% Reduction Period	> 95 250	C

14.4. Test Procedure

The EUT and its load are placed on a table which is 0.8 meter above a metal ground plane measured 1m*1m min. And 0.65mm thick min. And projected beyond the EUT by at least 0.1m on all sides. The power cord shall be used the shortest power cord as specified by the manufacturer.

For Voltage Dips/ Interruptions test:

The selection of test voltage is based on the rated power range. If the operation range is large than 20% of lower power range, both end of specified voltage shall be tested. Otherwise, the typical voltage specification is selected as test voltage.

The EUT is connected to the power mains through a coupling device that directly couples to the Voltage Dips and Interruption Generator.

The EUT shall be tested for 30% voltage dip of supplied voltage and duration 25 Periods, for 95% voltage dip of supplied voltage and duration 0.5 Periods with a sequence of three voltage dips with intervals of 10 seconds, and for 95% voltage interruption of supplied voltage and duration 250 Periods with a sequence of three voltage interruptions with intervals of 10 seconds.

Voltage phase shifting are shall occur at 0^0, 45^0, 90^0 ,135^0 ,180^0 ,225^0, 270^0 ,315^0 of the voltage.

14.5. Deviation from Test Standard

No deviation.

14.6. Test Result

Product	Personal Computer		
Test Item	Voltage dips and interruption		
Test Mode	Mode 1: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (LI SHIN)		
Date of Test	2008/05/02	Test Site	No.6 Shielded Room

Voltage Dips and Interruption Reduction(%)	Angle	Test Duration (Periods)	Required Performance Criteria	Performance Criteria Complied To	Test Result
30(161V)	0	25	C	A	PASS
30(161V)	45	25	C	A	PASS
30(161V)	90	25	C	A	PASS
30(161V)	135	25	C	A	PASS
30(161V)	180	25	C	A	PASS
30(161V)	225	25	C	A	PASS
30(161V)	270	25	C	A	PASS
30(161V)	315	25	C	A	PASS
>95(0V)	0	0.5	B	A	PASS
>95(0V)	45	0.5	B	A	PASS
>95(0V)	90	0.5	B	A	PASS
>95(0V)	135	0.5	B	A	PASS
>95(0V)	180	0.5	B	A	PASS
>95(0V)	225	0.5	B	A	PASS
>95(0V)	270	0.5	B	A	PASS
>95(0V)	315	0.5	B	A	PASS
>95(0V)	0	250	C	C	PASS
>95(0V)	45	250	C	C	PASS
>95(0V)	90	250	C	C	PASS
>95(0V)	135	250	C	C	PASS
>95(0V)	180	250	C	C	PASS
>95(0V)	225	250	C	C	PASS
>95(0V)	270	250	C	C	PASS
>95(0V)	315	250	C	C	PASS

☒ Meet criteria A: Operate as intended during and after the test
☐ Meet criteria B: Operate as intended after the test
☒ Meet criteria C: Loss/Error of function
☐ Additional Information
  ☐ The nominal voltage of EUT is 230V.
  ☐ EUT stopped operation and could / could not be reset by operator at _____ kV of Line _____.

☒ No false alarms or other malfunctions were observed during or after the test. The acceptance criteria were met, and the EUT passed the test.

Product	Personal Computer		
Test Item	Voltage dips and interruption		
Test Mode	Mode 2: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (DELTA)		
Date of Test	2008/05/02	Test Site	No.6 Shielded Room

Voltage Dips and Interruption Reduction(%)	Angle	Test Duration (Periods)	Required Performance Criteria	Performance Criteria Complied To	Test Result
30(161V)	0	25	C	A	PASS
30(161V)	45	25	C	A	PASS
30(161V)	90	25	C	A	PASS
30(161V)	135	25	C	A	PASS
30(161V)	180	25	C	A	PASS
30(161V)	225	25	C	A	PASS
30(161V)	270	25	C	A	PASS
30(161V)	315	25	C	A	PASS
>95(0V)	0	0.5	B	A	PASS
>95(0V)	45	0.5	B	A	PASS
>95(0V)	90	0.5	B	A	PASS
>95(0V)	135	0.5	B	A	PASS
>95(0V)	180	0.5	B	A	PASS
>95(0V)	225	0.5	B	A	PASS
>95(0V)	270	0.5	B	A	PASS
>95(0V)	315	0.5	B	A	PASS
>95(0V)	0	250	C	C	PASS
>95(0V)	45	250	C	C	PASS
>95(0V)	90	250	C	C	PASS
>95(0V)	135	250	C	C	PASS
>95(0V)	180	250	C	C	PASS
>95(0V)	225	250	C	C	PASS
>95(0V)	270	250	C	C	PASS
>95(0V)	315	250	C	C	PASS

☒ Meet criteria A: Operate as intended during and after the test
☐ Meet criteria B: Operate as intended after the test
☒ Meet criteria C: Loss/Error of function
☐ Additional Information
  ☐ The nominal voltage of EUT is 230V.
  ☐ EUT stopped operation and could / could not be reset by operator at _____ kV of Line _____.

☒ No false alarms or other malfunctions were observed during or after the test. The acceptance criteria were met, and the EUT passed the test.

Product	Personal Computer		
Test Item	Voltage dips and interruption		
Test Mode	Mode 3: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (BesTec)		
Date of Test	2008/05/20	Test Site	No.6 Shielded Room

Voltage Dips and Interruption Reduction(%)	Angle	Test Duration (Periods)	Required Performance Criteria	Performance Criteria Complied To	Test Result
30(161V)	0	25	C	A	PASS
30(161V)	45	25	C	A	PASS
30(161V)	90	25	C	A	PASS
30(161V)	135	25	C	A	PASS
30(161V)	180	25	C	A	PASS
30(161V)	225	25	C	A	PASS
30(161V)	270	25	C	A	PASS
30(161V)	315	25	C	A	PASS
>95(0V)	0	0.5	B	A	PASS
>95(0V)	45	0.5	B	A	PASS
>95(0V)	90	0.5	B	A	PASS
>95(0V)	135	0.5	B	A	PASS
>95(0V)	180	0.5	B	A	PASS
>95(0V)	225	0.5	B	A	PASS
>95(0V)	270	0.5	B	A	PASS
>95(0V)	315	0.5	B	A	PASS
>95(0V)	0	250	C	C	PASS
>95(0V)	45	250	C	C	PASS
>95(0V)	90	250	C	C	PASS
>95(0V)	135	250	C	C	PASS
>95(0V)	180	250	C	C	PASS
>95(0V)	225	250	C	C	PASS
>95(0V)	270	250	C	C	PASS
>95(0V)	315	250	C	C	PASS

☒ Meet criteria A: Operate as intended during and after the test
☐ Meet criteria B: Operate as intended after the test
☒ Meet criteria C: Loss/Error of function
☐ Additional Information
  ☐ The nominal voltage of EUT is 230V.
  ☐ EUT stopped operation and could / could not be reset by operator at _____ kV of Line _____.

☒ No false alarms or other malfunctions were observed during or after the test. The acceptance criteria were met, and the EUT passed the test.

14.7. Test Photograph

Test Mode : Mode 1: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (LI SHIN)

Description : Voltage Dips Test Setup

Test Mode : Mode 2: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (DELTA)

Description : Voltage Dips Test Setup

Test Mode : Mode 3: Intel Genuine CPU@1.6GHz,D-SUB (2048*1536/60Hz) with Adapter (BesTec)

Description : Voltage Dips Test Setup

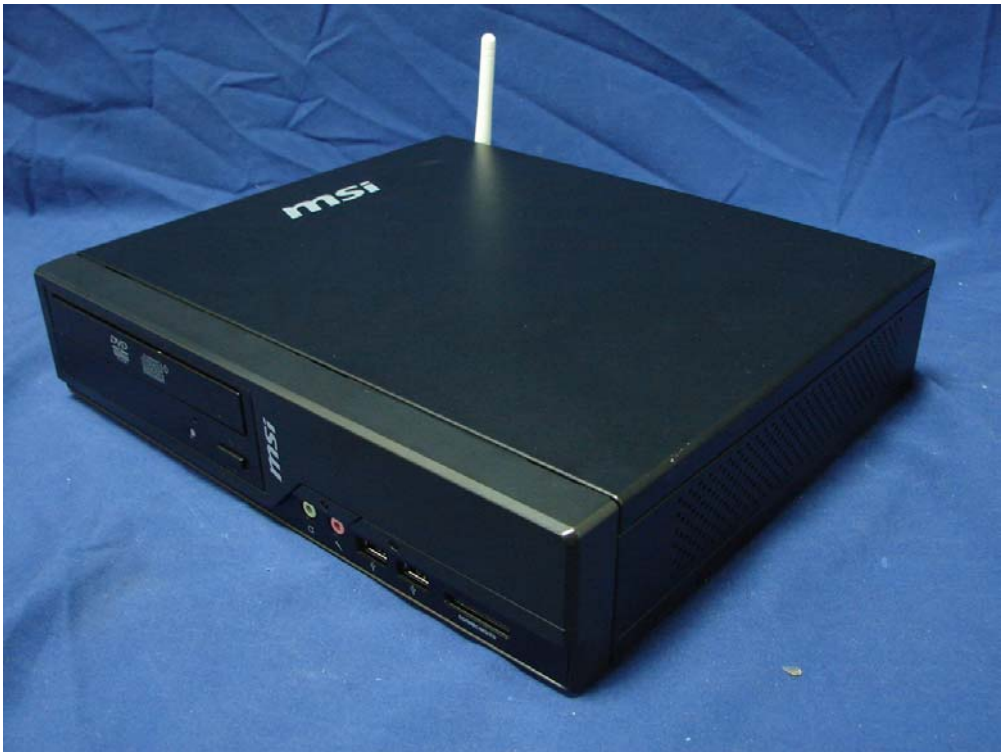
15. Attachment

➢ EUT Photograph

(1) EUT Photo

(2) EUT Photo

(3) EUT Photo



(4) EUT Photo

(5) EUT Photo

(6) EUT Photo

(7) EUT Photo

(8) EUT Photo

(9) EUT Photo

(10) EUT Photo

(11) EUT Photo

(12) EUT Photo

(13) EUT Photo

Bestec
AC ADAPTER 电源适配器/電源轉接器
MODEL(型号/型號): NA6501WB MS
INPUT(输入/輸入): 100-240V~ 1.62A(1,62A) 50/60Hz
OUTPUT(输出/輸出): +19V ⎓ 3.42A(3,42A)
CAUTION(警告)
For use with IEC 60950 Products Only
ATTENTION :
S/N: 8E65010003
SERVICE PROVIDER
86-769-88637818
MANUFACTURER KTL SU10270-7001
Bestec Electronics (DongGuan) Co.,Ltd
5F55
E127778
LISTED
I.T.E. POWER SUPPLY
SAFETY MARK
070375-11
R33242
N136
MADE IN CHINA